

R-9

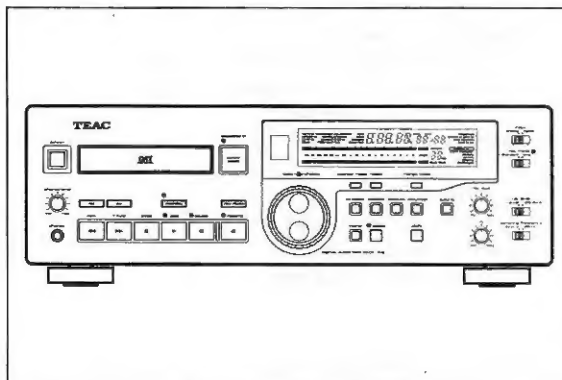
DIGITAL AUDIO TAPE DECK

Thanks for buying a TEAC. Read this manual carefully to get the best performance from this unit.

Nous vous remercions pour l'achat d'un appareil TEAC.
Lire ce manuel avec attention pour obtenir les meilleures performances possibles de cet appareil.

Vielen Dank für den Kauf dieses TEAC-Geräts.
Bitte lesen Sie diese Anleitung sorgfältig durch, um die Leistungsfähigkeit dieses Geräts optimal nutzen zu können.

Grazie per aver acquistato un prodotto TEAC.
Leggere attentamente questo manuale per ottenere le migliori prestazioni da questo apparecchio.



OWNER'S MANUAL	2
MANUEL DU PROPRIETAIRE	26
BEDIENUNGSANLEITUNG	33
MANUALE DI ISTRUZIONI	40



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

This appliance has a serial number located on the rear panel. Please record the model number and serial number and retain them for your records.

Model number _____
Serial number _____

**WARNING: TO PREVENT FIRE OR SHOCK
HAZARD, DO NOT EXPOSE THIS
APPLIANCE TO RAIN OR MOISTURE.**

TABLE OF CONTENTS

Introduction	2
Important Safety Instructions	3
Set-up	
1. Unpacking and Inspection	4
2. Installation Site	4
3. Initial Connections	4
Subcodes	5
What is SCMS	5
DAT Cassette Tape	6
Operations: Playback	
1. Playing a Prerecorded Tape	8
2. Choosing Selections	8
3. Autolocating to the Desired Point	8
4. Repeat Play	8
5. Programed Sequence Play (from the remote only)	9
Operations: Recording	
1. Digital/Analog Audio Recording	10
2. Editing Start IDs, Skip IDs, and Program Numbers	13
Features and Controls	
Front Panel	15
Rear Panel	19
RC-563 Remote Control Unit	20
Specifications	22
Problems and Solutions	25

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Introduction

Thank you for choosing the TEAC R-9 digital audio tape deck. The R-9 was designed for professional use and its features include the following:

- High performance 1-bit type AD/DA system
- Multiple sampling rates supported
- Long record/play mode allowing recording/playback up to 4 hours
- MANUAL/REFERENCE switch in the analog input
- Shuttle and autolocation
- Selectable AUTO ID sensitivity level
- Multifunction remote control

There are functions which are controllable only from the remote control unit, RC-563 (see also p.20).

Before actually using the R-9, read this manual thoroughly at least once, so you will know where to return when you need answers.

Use of capital letters: In general, we use all upper case type to designate a particular switch, control or jack label or indication appearing in the display window.

THE APPLIANCE CONFORMS WITH EEC DIRECTIVE 87/308/EEC REGARDING INTERFERENCE SUPPRESSION

CONFORME AL D.M. 13 APRILE 1989
DIRETTIVA CEE/87/308

For U.S.A.

TO THE USER

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference in a residential area. This device generates and uses radio frequency energy and if not installed and used in accordance with the instructions, it may cause interference to radio or TV reception. If this unit does cause interference with TV or radio reception you can try to correct the interference by one or more of the following measures :

- a) Reorient or relocate the receiving antenna.
- b) Increase the separation between the equipment and the receiver.
- c) Plug the equipment into a different outlet so that it is not on the same circuit as the receiver.

If necessary, consult the dealer or an experienced radio/TV technician for additional suggestions.

CAUTION

Changes or modifications to this equipment not expressly approved by TEAC CORPORATION for compliance could void the user's authority to operate this equipment.

Important Safety Instructions

CAUTION:

- Read all of these Instructions.
- Save these Instructions for later use.
- Follow all Warnings and Instructions marked on the audio equipment.

- 1) **Read instructions** — All the safety and operating instructions should be read before the product is operated.
- 2) **Retain instructions** — The safety and operating instructions should be retained for future reference.
- 3) **Heed Warnings** — All warnings on the product and in the operating instructions should be adhered to.
- 4) **Follow instructions** — All operating and use instructions should be followed.
- 5) **Cleaning** — Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- 6) **Attachments** — Do not use attachments not recommended by the product manufacturer as they may cause hazards.
- 7) **Water and Moisture** — Do not use this product near water — for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.
- 8) **Accessories** — Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
- 9) A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

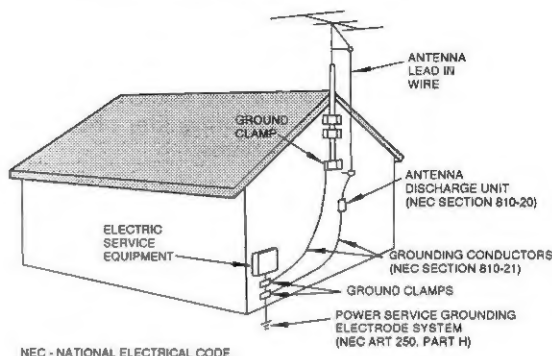


- 10) **Ventilation** — Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
- 11) **Power Sources** — This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
- 12) **Grounding or Polarization** — This product may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- 13) **Power-Cord Protection** — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
- 14) **Outdoor Antenna Grounding** — If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

"Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Section 820-40 of the NEC which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Example of Antenna Grounding as per
National Electrical Code, ANSI/NFPA 70



- 15) **Lightning** — For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
- 16) **Power Lines** — An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
- 17) **Overloading** — Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in risk of fire or electric shock.
- 18) **Object and Liquid Entry** — Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
- 19) **Servicing** — Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 20) **Damage Requiring Service** — Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a) when the power-supply cord or plug is damaged.
 - b) if liquid has been spilled, or objects have fallen into the product.
 - c) if the product has been exposed to rain or water.
 - d) if the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
 - e) if the product has been dropped or damaged in any way.
 - f) when the product exhibits a distinct change in performance — this indicates a need for service.
- 21) **Replacement Parts** — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
- 22) **Safety Check** — Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
- 23) **Wall or Ceiling Mounting** — The product should be mounted to a wall or ceiling only as recommended by the manufacturer.
- 24) **Heat** — The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

Set-up

1. UNPACKING AND INSPECTION

During unpacking, be careful not to damage the R-9. Save the carton and packing material. You may need them to transport your R-9 sometime in the future.

After unpacking, check the units for any evidence of damage due to rough handling during transport. Contact your dealer if you have any questions.

2. INSTALLATION SITE

The R-9 may be used in most areas, but to maintain top performance and prolong operating life, observe the following environmental limitations:

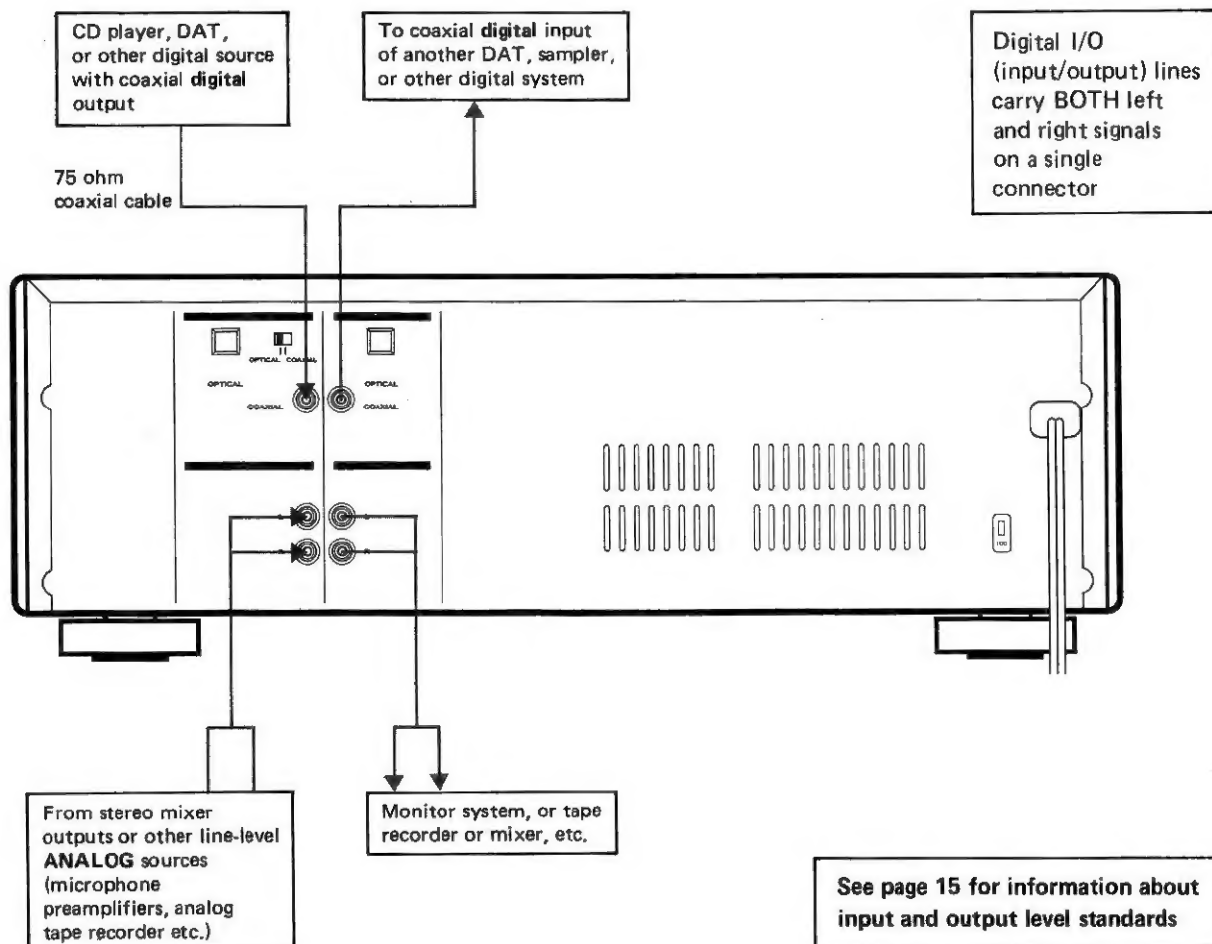
- 1) Nominal temperature should be 5 to 35 degrees Centigrade (41 to 95 degrees Fahrenheit).
- 2) Relative humidity should be 30 to 60% (non-condensing).
- 3) Strong magnetic fields should not exist nearby.

3. INITIAL CONNECTIONS

CAUTION: To prevent problems, before attempting any cable connection check to make sure that all units involved in your system are turned off.

Input/Output Connections

Make the appropriate cable connections by referring to the connection diagram below and to page 15.



Subcodes

The following subcodes are available with the R-9:

Subcode		Identifies:	Length and Location of Data Recording:	Recorded Automatically or Not:
Index Data	Start ID	Beginning of each program	9 seconds at the beginning of each program	Auto and Manual
	Skip ID	Point from where tape is made to fast wind to the next Start ID	1 second at the desired point	Manual only
	End ID	End of the existing audio recordings	9 seconds at the end of the last recording	Manual only
	Program Number (PNO)	How many programs from the beginning of the tape is the current one	9 seconds at the beginning of each program	Auto only
Time Data	Absolute Time (ABS)	Elapsed time from the beginning of the tape	Full length of the audio recordings	Auto only
	Program Time (PGM)	Elapsed time from the beginning of each program	9 seconds at the beginning of each program	Auto only

All the above subcode data (except the absolute time) are recorded for the indicated time or, in LONG REC MODE, for twice the indicated time. In passing when recording Start or Skip ID marks with POSITION after once completing audio recording, they are recorded over the indicated length, whether audio was recorded in STANDARD or LONG REC MODE.

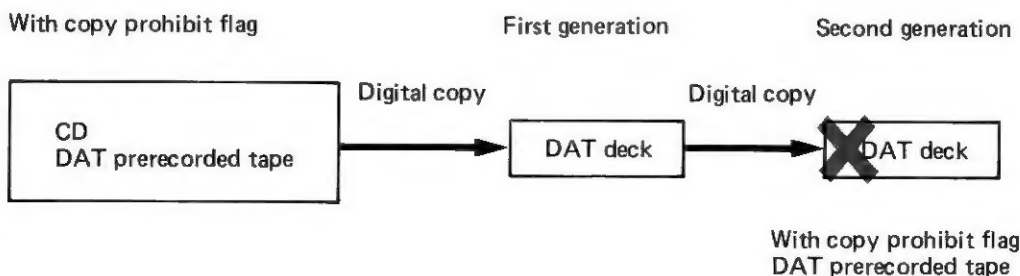
NOTE: If play starts from an intermediate point beyond the program-time recorded section, the display does not show the elapsed time from the beginning of the program.

What is SCMS

The R-9 digital audio tape deck is compatible with the SCMS (Serial Copy Management System). SCMS permits at least the first-generation digital recording of various digital signal sources (software) as it is. For example, it

is possible to record a compact disc onto a DAT tape as a digital signal. However, the recorded tape cannot be re-recorded onto another tape as a digital signal because there is a copy prohibit flag.

• Copying digital sources

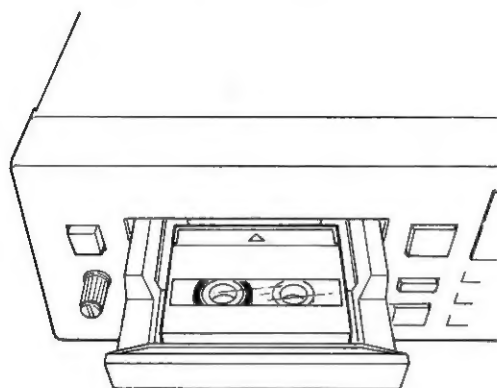


DAT Cassette Tape

• How to Load a DAT Cassette

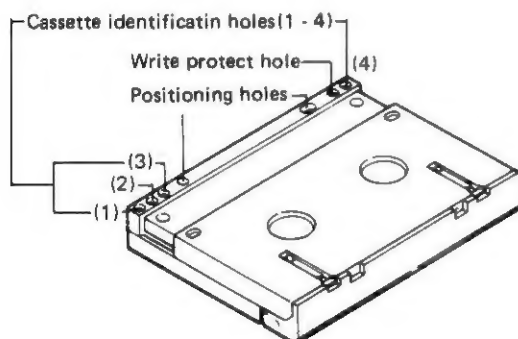
The hinged part of the cassette must go in first, with the clear window facing up. Similar to a VCR tape, the label surface of the cassette will be visible.

Make sure no foreign objects or dirt falls into the tray which can contaminate the transport.



• Structure of DAT Cassettes

Bottom view

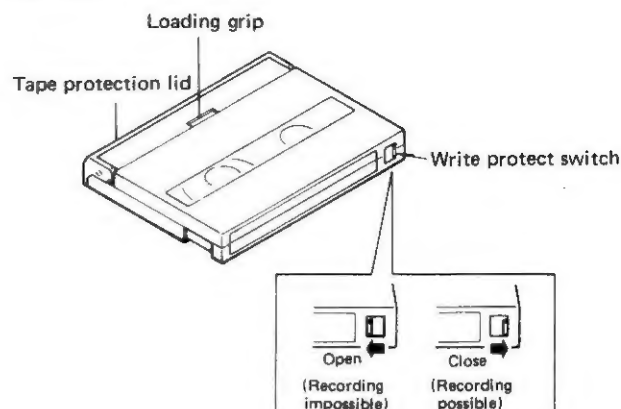


Identification Hole			Signified
1	2	3	
X	X	X	Metal coating or equivalent/13 μ m tape thickness
X	○	X	Metal coating or equivalent/Thin tape
X	X	○	1.5 time track pitch/13 μ m tape thickness
X	○	○	1.5 time track pitch/Thin tape
○	—	—	(Reserved for auxiliary tape type definitions)

Where: "○" = Open
"X" = Closed

- Hole #4 shows "prerecorded" (Open) or not (Closed).

Top view



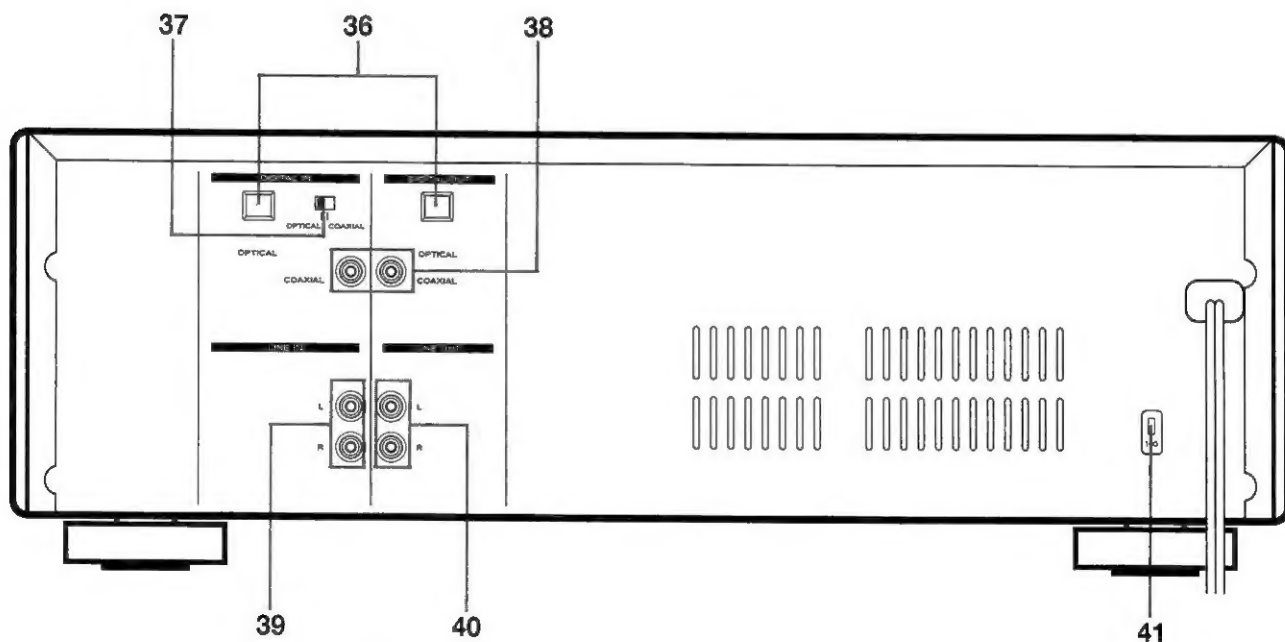
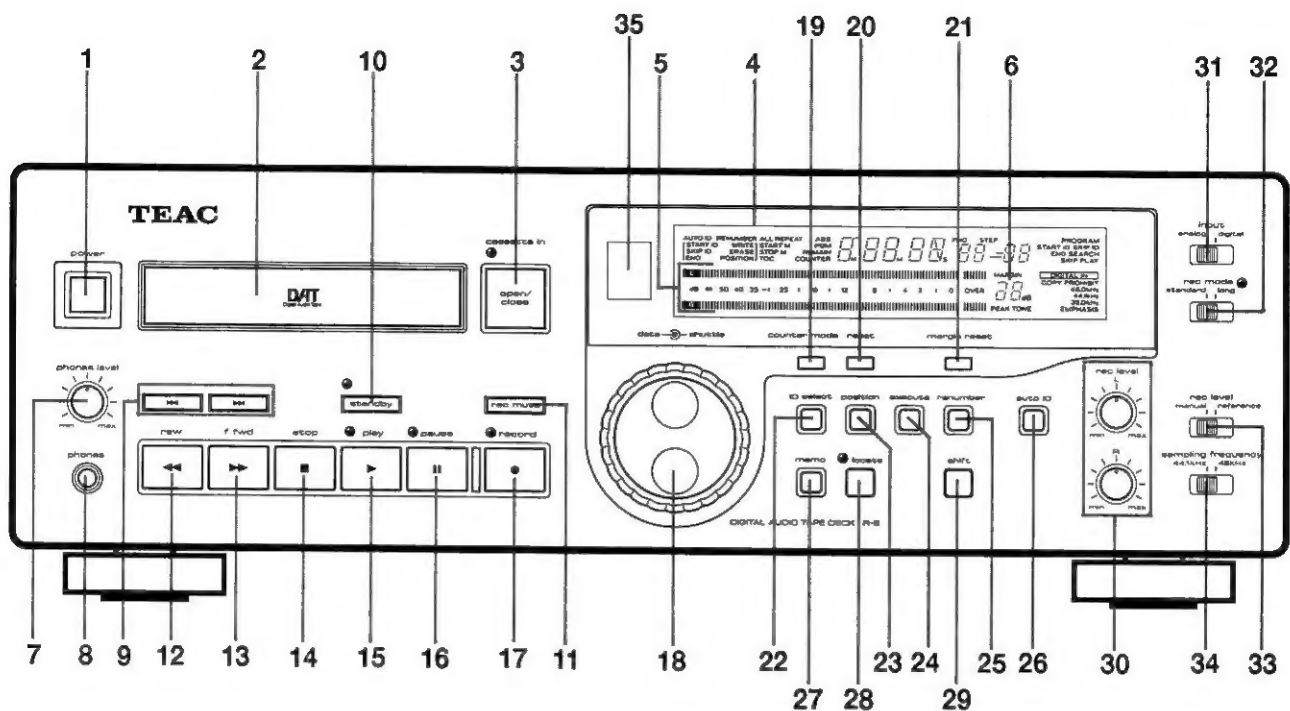
- Dimensions: 73 x 54 x 10.5 mm (W x D x H)
- Tape width: 3.81 mm

Notes:

- Cassette shells are designed so as to prevent touching the tape directly by hand.
- DAT cassettes can be loaded and unloaded only when the R-9 is switched on.
- DAT cassettes record and play in one direction only. Do not load DAT cassettes upside down.
- DAT cassettes have a tape protection lid on the front edge to protect the tape. Do not open this lid forcibly, and do not pull the tape out from the cassette or touch it with your fingers.
- Be sure to replace DAT cassettes in their plastic cases for storage.
- Do not place DAT cassettes on a television, speaker or near equipment which could generate a magnetic field.
- The tape used in 180-min cassettes is extremely thin and can cause winding problems, crimping, wrinkling, and other damage to the tape which will destroy your work. Don't use 180-min cassettes in the R-9.

BEWARE OF CONDENSATION

When the R-9 is moved from a cold to a warm place or used after sudden temperature change, there is the danger of condensation; water vapor in the air could condense on the internal mechanism, making correct operation impossible. To prevent this, or if this occurs, leave the R-9 for 1 or 2 hours with the power turned on, then turn the power off and again on.



1. PLAYING A PRERECORDED TAPE

1. Check to see all the connections have been made correctly.
2. Turn the power on.
3. Press the OPEN/CLOSE button. The tray will slide out, the "CASSETTE IN" indicator will blink and "OPEN" will also blink in the display window.
4. Load a prerecorded DAT cassette in the tray, then close the tray:
 - a) Press the OPEN/CLOSE button again or push the tray closed with your hand.
OR
 - b) Directly press the PLAY button. The tray will close and the tape will start playing.

As soon as the tray starts retracting, "CLOSE" will start blinking instead of "OPEN". Once the tray has closed, "CLOSE" will turn off and "CASSETTE IN" that was blinking will go on solid.

After the tray has closed with a cassette in it, the tape automatically runs for a short period of time and rewinds back to the original location, during the interval of which the R-9 reads absolute time and program number data (if available) off the tape into its display.

5. Adjust the PHONES control for the desired listening level.
- To interrupt play press PAUSE. To resume play press PLAY.
 - To definitely stop play press STOP.

2. CHOOSING SELECTIONS

1. To advance to the next selection, press ►►. The tape will fast-forward to the next START ID, and then automatically go into PLAY mode (if STANDBY is not on). You may press ►► or ◀◀ a number of times to advance or rewind past several selections.
2. To play a specific program on the tape (i.e. "Direct Search"), turn the DATA wheel so that the desired PGM number shows blinking, then press PLAY. Or press a number on the remote keypad (for example, press "5") and press START. If there are PGM numbers and Start IDs on the tape, it will fast wind to that selection and play.

3. AUTOLOCATING TO THE DESIRED POINT

The R-9 autolocation works by referencing to the ABS time data on tape.

Only one locate point can be set.

By capturing the current point

Press MEMO on the fly or when the transport is in any mode.

The ABS time at that moment is stored in memory defined as an autolocation point as confirmed by the display being flashing for several seconds.

By entering the desired ABS time numbers with the DATA wheel (while in STOP, PLAY-PAUSE or STANDBY mode)

1. Hold SHIFT and press MEMO. The numbers in the hour section will start blinking.
2. Enter the desired hour numbers with the DATA wheel.
3. Press SHIFT to have the numbers in the minute section blink, then enter the desired minute numbers.
4. In a similar way, enter the numbers in the second section.
5. Press MEMO to store the setting in memory. The display will flash for several seconds.

To have the R-9 autolocate to the location currently stored in memory:

Press LOCATE. The associated LED will blink during the autolocate process, and turn off when the process is complete and the deck stops.

Suggestion: You can see the location currently stored in memory by holding SHIFT and pressing MEMO. The display will automatically be hidden after a while.

NOTE: The remote numeric keys cannot be used to set autolocate points.

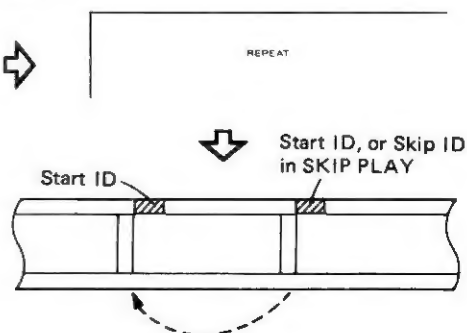
NOTE: Your autolocate point is erased when turning the R-9 off.

4. REPEAT PLAY

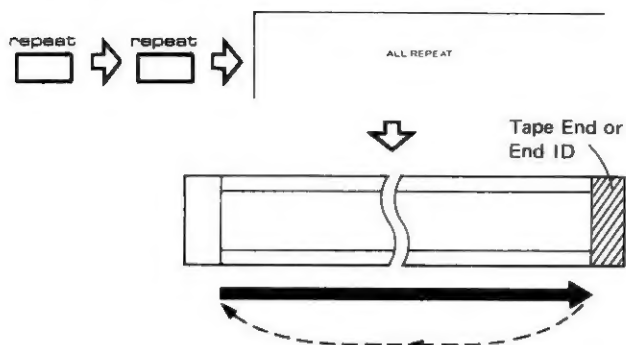
The following can be programmed to play over and over up to 16 times or until you press PAUSE or STOP:

- One Selection — Press the remote REPEAT button once during play or before starting play. "REPEAT" will light up in the display. The current program will play over and over.

repeat



- Whole Cassette - Press the remote REPEAT button TWICE during play or before starting play. "ALL REPEAT" will light up in the display. The entire length of the tape will continue to play.



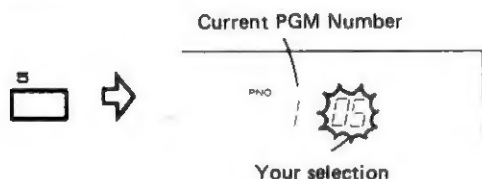
- Sequence of Programs — Press the remote REPEAT button ONCE when a "PROGRAM" sequence (see below) is playing or before starting the sequence. "ALL REPEAT" will light and the sequence of programs will continue to repeat.

5. PROGRAMED SEQUENCE PLAY (from the Remote Only)

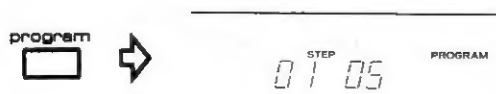
Up to 50 programs can be loaded into memory for them to be played in their order of entry. Playback of the sequence of programs can be continuously or once thru.

Programming a sequence is only possible in STOP.

1. Using the remote numeric keys, enter the number of the program you want to play before any other programs. The numerals entered will be blinking in the display.



- If you make a mistake press CLEAR and enter the correct numerals.
2. Press the remote PROGRAM key. "STEP 01" will be displayed instead of the current program number ("PNO"), and the word "PROGRAM" will turn on solid in the display



3. In a similar way, put the other desired programs into memory in their order of play.

- If you want to check the sequence press CHECK. Each time you press CHECK, the number of the next program in memory will be displayed. When you have browsed through the whole sequence "EE" (stands for End) will appear in the display window.

- To erase an entire program — To quit program play, press STOP, and the entire PROGRAM memory will be cleared so you can start again.

- To delete only the last PGM in a sequence, press CLEAR.

- You can't delete a PGM in the middle of a sequence, without pressing CLEAR to remove all of the PGMs following it first, or deleting all the program memories by pressing STOP. You can then re-enter the programs that *were* behind that particular program.

- To change the whole sequence — Press STOP to clear all the memories, and try again from the beginning.

4. To start the sequence play — Press the remote START button. "SEARCH" will light up in the display. When the start point of the first program in memory is located, "SEARCH" will disappear and play will start.



- You can use ◀◀ or ▶▶ to fast wind the tape to the start point of the next or the last program in memory. In PROGRAM play this disregards all programs that are not in memory.

- To stop the sequence, press PAUSE or STOP.

- To clear the program memories, press STOP (not CLEAR) in STOP. Pressing CLEAR has only the effect of clearing the last program in memory.

CAUTION: Use care not to accidentally press STOP twice if you are in PROGRAM mode, unless you want to delete the entire PGM memory.

Operations: Recording

1. DIGITAL/ANALOG AUDIO RECORDING

1. Refer to the connection diagrams on page 4, and connect your recording source to the correct inputs of the R-9.
2. Turn the system on.
3. Load a blank DAT cassette tape; or, if you intend to add a new recording to the existing recordings, load the tape containing those recordings.

4. ANALOG SOURCE RECORDING

- a. Make the following switch settings:

REC LEVEL: Set to REFERENCE if the nominal output level of the source unit in use is 500 mV. Otherwise, set the switch to MANUAL so that you can operate the REC LEVEL controls.

SAMPLING FREQUENCY: Set to 48 kHz for standard DAT recording, or to 44.1 kHz if the recording will be used as a digital CD master recording.

- b. Put the deck into "Input Monitor" (or "sampling monitor") mode by holding the remote's STOP and pressing its RECORD (or, alternatively, press the sole RECORD of the R-9 in STOP). Then, adjust the REC LEVEL L and R controls so that peaks from the source unit don't reach the OVER area in the peak level meters.
- c. Press MARGIN RESET to see the instantaneous peak level of the current signal. The maximum level will read "0" in the MARGIN display, meaning that you have recorded to the maximum level allowable and there is no headroom left. If you exceed the maximum level, the "0" will blink, indicating the tape is distorted.

DIGITAL SOURCE RECORDING

Set the INPUT select switch to DIGITAL. If the digital source is transmitting, the correct sample frequency will automatically be chosen and displayed.

- Recording digital sources does not require any input level adjustment.
5. If you intend to record an analog source or a digital source which was recorded at a sampling rate of 32 kHz, set the REC MODE switch to STANDARD or to LONG as desired. Selecting LONG enables recording at 1/2 X standard speed.

NOTE: If you intend to record a digital source, the selection of LONG REC MODE is effective only when the sampling rate used on the part of the source is 32 kHz. If the source was originally recorded at 44.1 or 48 kHz, the R-9 automatically goes into STANDARD mode.

6. If you are using a new blank tape — Press **REW** (regardless of the current tape position). The tape will be located to a point 100 mm ahead of the end of the leader tape. If you do not perform this step, or record from the middle of a blank tape, ABS time will not be recorded in the subcode area for later reference, and the ABS display will be blank.

If you are using a tape containing some programs previously recorded — Locate the tape to the end of the existing recordings using the remote **END SEARCH** function. This will locate to the first "unformatted" section.

CAUTION: Don't overwrite. First, erase the first several seconds of existing recording(s) by recording no-signals. Otherwise, parts of the existing recordings may be left, or when played back, first notes may be clipped off or traces of ID marks may prevent search features or others from functioning correctly.

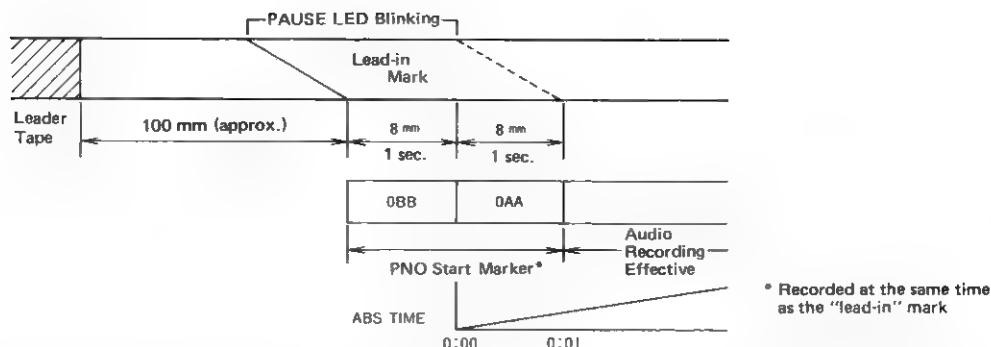
- Note that "blank" tape that has never been recorded is different from "blank" tape that has been recorded with silence — the latter is recorded with subcode information such as ABS and PROGRAM time information. The remote **END SEARCH** function locates the R-9 to the first totally blank unformatted section, not the first "silent" section.
 - If the recorded section of the tape was recorded with ABS time in the subcode, ABS time will continue recording from the **END SEARCH** point.
7. Hold **RECORD** and press **PAUSE**.

- **Automatic Lead-in Feature:** When recording in digital or analog using a new blank tape, the R-9's **PAUSE** LED indicator blinks for a few seconds while a "lead-in" mark is automatically recorded. While the **PAUSE** LED is blinking, do not change settings of the Input Select (31), REC MODE (32), or SAMPLING FREQUENCY Select (34) switches.

As a result of automatic "lead-in" recording, tape playback can begin at the "lead-in" mark rather than at the very start of the audio recording, so the beginning of the recording can be heard completely and unclipped. See diagram on page 11.

- Directly entering **RECORD-PLAY** mode (without first passing through **RECORD-PAUSE** mode) will also automatically record the "lead-in" mark before actually starting normal audio recording.

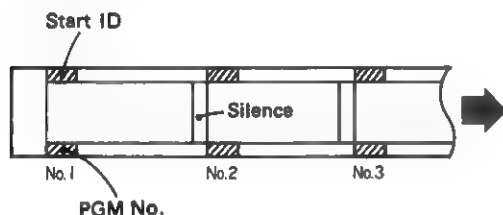
CAUTION: While the "lead-in" mark is recording (**PAUSE** LED blinking), no audio can be recorded. To follow a tight audio record start, first record the "lead-in" in **RECORD-PAUSE** instead of directly going into **RECORD-PLAY** mode.



8. **START ID marking options:** Start IDs are electronic index marks in the subcode area of the tape that make it easy to find the start of each selection on the tape. You can make START ID marks during the initial audio recording, or add them to the recording later. Consider the following possibilities before actually initiating audio recording:

AUTO ID: In this mode, a Start ID and Program Number will be automatically recorded at each occurrence of audio levels exceeding -54 dB or user-selected decibels (discussed below) after a lapse of about 3-second lower levels or silence.

- Press the AUTO ID key, and check to see "AUTO ID" lights in the display.



Note that a quiet passage ("pianissimo") might cause the beginning of the next passage to be indexed and numbered as if it were a new program. Don't worry. You can correct it (with "Start Erase") later.

Suggestion: The sensitivity level of the AUTO ID circuit defaults to -54 dB but can be set to -60, -66, -72 or -48 dB. If you want to change the sensitivity level, hold SHIFT and press AUTO ID until the desired level shows when the R-9 is stationary (in STOP, PLAY-PAUSE or STANDBY mode), or while it is playing. Don't use -72 dB but for digital recording.

CAUTION: Use AUTO ID from the beginning of tape. If you use the function from an intermediate point, Start IDs are recorded but not Program Numbers (unless the previous PNO is read).

MANUAL START ID WRITE: You can manually index the beginning of each program. Program time is automatically recorded together with START IDs. This is done with AUTO ID turned OFF.

- In STOP, PLAY or RECORD mode, press the ID SELECT button until "START ID WRITE" lights in the display. START ID WRITE is actually executed on the tape when you hit EXECUTE after once recording starts. (You can also hit EXECUTE during play too.)

Start ID recording is noted by "START ID" flashing on the right hand side of the display. The Start ID lasts approximately 9 seconds or, in LONG REC MODE, 18 seconds. It can be recorded anywhere on a tape, as long as there are at a minimum 30 seconds in terms of ABS time.

- While a START ID is being written, all transport buttons except for STOP are locked out.

9. Press PLAY. Recording will initiate.

If you have turned on "AUTO ID", the instant the first note of the music is actually fed to the tape, recording of the following starts at the same time:

Start ID reference

Program Number (PNO) (When the tape starts from the beginning or the previous PNO has been read off the tape)

Program Time

Absolute Time (when a blank tape starts from the beginning, or a prerecorded tape starts from its END ID)

The first three items are recorded in the digital subcode for 9 or 18 seconds depending on REC MODE each time a new audio recording is made. Program Time (PGM) provides the elapsed time since the beginning of each song. Absolute Time (ABS) is a recording of the time elapsed since the beginning of the tape. No matter how many times recordings are repeated, ABS will be re-recorded with the correct numbers from the previous recording.

- To interrupt audio recording temporarily, press PAUSE. A subsequent pressing of PLAY will resume the recording.
- To definitely end recording, press STOP. Or, you may want to end recording by indexing that point as explained as follows.

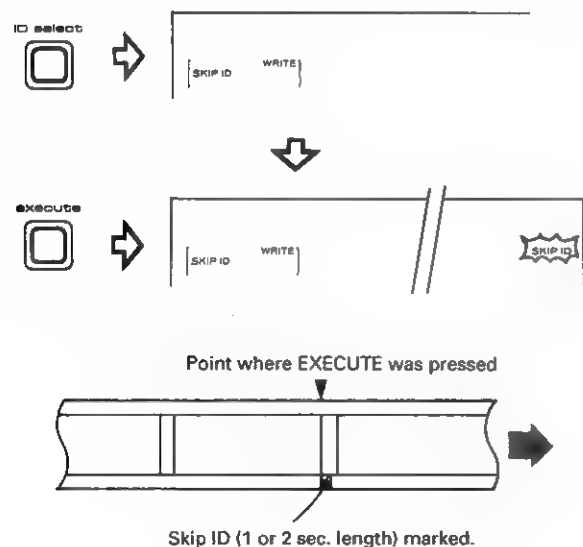
- To insert a "no-signal" silent interval of 4 seconds while recording, press the REC MUTE button. The RECORD LED indicator will start blinking. After 4 seconds the deck will go back to Record Ready mode.

If you have already stopped recording, hold RECORD and press PAUSE, then press REC MUTE.

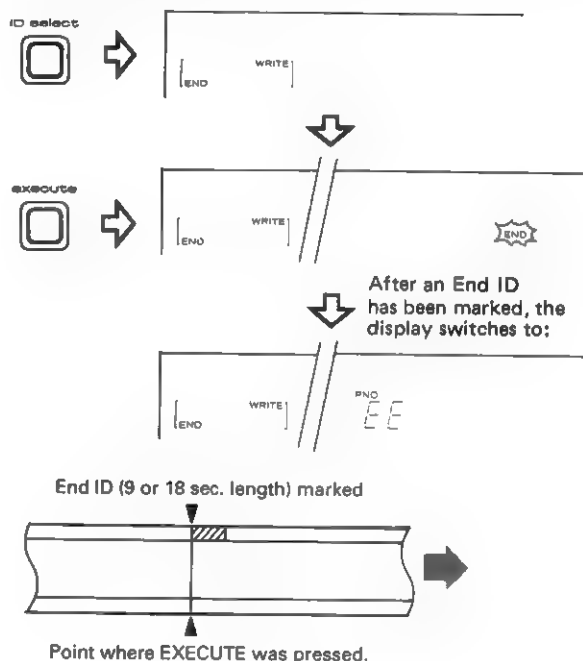
- When recording Digital Sources — If "32 kHz" and "48 kHz" blink alternately in the display, it shows the following:
 - a) There is an improper connection somewhere in your recording system;
 - b) Your system includes a unit or units that are not turned on.
- While audio recording is taking place, you can lay Skip ID and End ID references on the tape at the desired moment, manually.

To record Skip ID references — Press the ID SELECT button repeatedly until the display shows "SKIP ID WRITE". At the desired moment, hit the EXECUTE button. "SKIP ID WRITE" will blink for 1 second (or 2 seconds in LONG REC MODE), during which a Skip ID reference is recorded on the tape. When this tape is played back later in SKIP PLAY, as soon as that Skip ID reference is detected, the tape will fast forward and play will resume from the next Start ID reference point.

If SKIP PLAY mode is off, the R-9 ignores Skip IDs.



To record End ID references — (Important: Recording an End ID results in stopping the deck.) Press the ID SELECT button until "END WRITE" lights in the display. At the desired moment, hit the EXECUTE button. "END WRITE" will blink showing an End ID reference is recording. After 9 or 18 seconds (depending on REC MODE) the indication will go out and the tape will automatically rewind, stopping at the beginning of that End ID reference recorded. The tape may be located from whatever the current position is to that point simply by pressing the remote END SEARCH button.



2. EDITING START IDs, SKIP IDs, AND PROGRAM NUMBERS

NOTE: Before anything else, check to see the write prohibit tab and hole on the cassette are NOT open.

1. INDEX EDITING

1-1. Positioning Start and Skip IDs

Both the start and skip indexes can be placed with 5 frame (150 millisecond) accuracy using the POSITION feature.

Preliminary Notes:

- 1) POSITION cannot "move" a START or SKIP ID already marked in the subcode. You must first erase the ID mark and use POSITION to write a new mark. If you press POSITION too close to an existing ID mark, the deck will go to STOP (in step 3 below).
 - 2) POSITION relies on Absolute Time (ABS) data recorded on the tape. You can't "position" any point where ABS data is not previously recorded.
 - 3) When Start/Skip Indexes are actually recording in POSITION mode, all transport controls are locked out except for STOP.
1. In PLAY mode, press the ID SELECT button repeatedly until "START ID WRITE" (or "SKIP ID WRITE") appears in the display window.

ID select



2. As you hear the appropriate point, press POSITION.

- The absolute time of that point will be read out in the time counter window and "POSITION" will blink while the deck will go to pause mode.

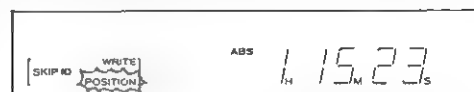
position



● play ● pause

3. To audition your original cue point, press PLAY. The tape will rewind back to the point where the POSITION button was pressed, during which the absolute time display will decrement. You will hear the approximate starting point of the cue, and then the deck will go back into PAUSE mode. You can audition the cue point as often as you wish.

NOTE: Due to transport ballistics, the actual play starting point will shift slightly depending on whether the deck is started from a STANDBY PAUSE mode, or DIRECT SEARCH/PLAY mode. If start times are critical for your application, you will need to experiment with different "frame settings" depending on which search/play you will use.

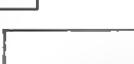


Upon locating the POSITION point



Plays for 3 sec.

4. To change the edit point in either direction, trim the absolute time display by pressing F.FWD and REW or with the DATA wheel. Each time the buttons are pressed or as you rotate the wheel, the display will increment/decrement in steps of 5 frames (150 milliseconds), up to a limit of 50 frames ahead or behind the original POSITION.



5. Audition the new cue point by pressing PLAY. Repeat steps 3 and 4 until you are sure that the POSITION point is correct.

6. To actually write the chosen point, press the EXECUTE button to begin indexing.

execute



IMPORTANT: After Start ID references have been added, RENUMBER can be used to add the correct PGM number to each Start ID on the tape. However, under some circumstances this can shift the cue point of the Start IDs slightly.

1-2. Erasing Start/Skip Indexes

Effects of erasing ID marks: Erasing a Start ID will also erase its Program Number at the same time. This will make any following PGM numbers out of sequence (for example, if you erase Start ID #4, the following PGM still carries the PGM number 5 unless you go through the RENUMBER operation).

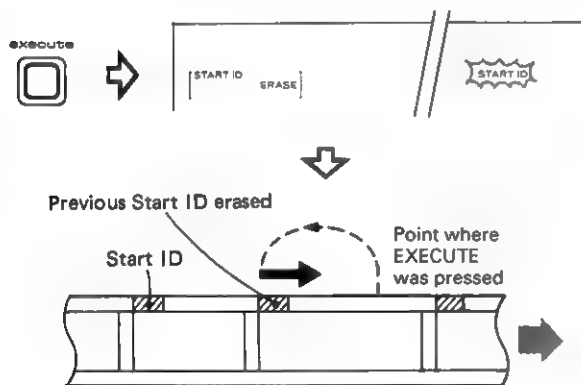
In addition, if a skip index exists somewhere on the length of a start index, that skip index also will be erased together with the start index.

Note, however, that a Start or Skip ERASE operation should not affect any of the audio data recorded on the tape.

1. During play or in STOP, press the ID SELECT button until "START ID ERASE" (or "SKIP ID ERASE") lights up in the display.



2. Press the EXECUTE button. The tape will rewind back to the beginning of the previous start (or skip) index mark, and begin erasing the mark in PLAY mode. "START ID ERASE" (or "SKIP ID ERASE") will blink in the display. When erasing is complete, the tape will continue to play normally.



1-3. End Indexes

Indexing an end of programs can only be possible in Record mode (see above, page 12, "To record End ID references").

When a new audio recording starts from the beginning of the previous end index recording, (i.e., after an END SEARCH operation), the old END ID will be erased.

CAUTION: Don't write an END ID at an intermediate point of the existing audio recordings, which invalidates all the recordings that follow the End ID. For example, if your tape contains 10 PGMs and you re-record PGM #3 and terminate it by writing an End ID mark, then the tape will not run past that point and you can't gain access to PGMs #4-10 unless you erase that End ID by re-recording PGM #4.

2. PROGRAM NUMBERS

2-1. Numbering Programs

Each time a new audio recording is added with **AUTO ID on** to the end of the existing recordings, they are automatically numbered in sequence provided that the R-9 has "read" a valid PGM number from the previous start ID.

2-2. Renumbering

Under certain circumstances, the PGM numbers on a tape will be out of order:

1. After a START ID is added in-between existing IDs
2. If a previous START ID is erased
3. If a Start ID is added to the end of a recorded section before the tape has passed a previous Start ID with a valid PGM number

In any case, all programs need to be renumbered in order. In play or STOP, press RENUMBER.



- The R-9 will rewind the tape to the beginning and will write the PGM Number "1" at the first Start ID it finds. It will then automatically advance to each Start ID on the tape, and write the next program number into the subcode until all the existing Start IDs have PGM numbers in the proper order.

Do not press STOP to interrupt the machine while "RENUMBER" is showing in the display.

- If you erase a Start ID, its Program Number (PNO) is automatically erased also. There is no way to erase only the PNO without erasing the Start ID.

Features and Controls

FRONT PANEL

1. **POWER Switch:** Controls the power to the R-9. When POWER is turned on with a tape loaded, the counter display will show the following indications.

- **Absolute Time ("ABS")**
If the tape is blank and contains no ABS information, the counter will switch to Tape Counter mode, as indicated by "COUNTER".
- **Current Program Number ("PNO")**
If "---" is indicated instead of any number, it shows the program is not numbered or the tape is located at a point in-between PNO marks.
- **"AUTO ID" indicator** (unless the cassette's write protect switch is on).
- The sampling rate of the prerecorded tape will be displayed.
- If the INPUT switch is in the DIGITAL position, "DIGITAL IN" will be lit.

When POWER is turned off all memories (PGM and autolocate point) are cleared.

2. **Cassette Tray:** For loading DAT cassettes only. Normal audio cassettes are not acceptable.
3. **OPEN/CLOSE Button and CASSETTE IN Indicator:** When the button is first pressed the cassette tray will slide out and the CASSETTE IN indicator will start to blink. After a cassette has been loaded, pressing the button again will retract the tray and the indicator will turn on solid.
The OPEN/CLOSE button can open the tray even when a tape is currently playing. Use care not to accidentally press this button.
4. **Display Window:** Provides you with a variety of information/messages, keeping you aware of what is currently taking place.

ABS: Indicates the elapsed time from the beginning of the tape up to the current position. If "---" is displayed in ABS mode, the tape was not recorded with ABS data.

During POSITION mode, the DAT frame position is displayed in smaller numbers next to the Seconds display. POSITION can adjust this point in 5 frame increments.

PGM: Indicates the elapsed time from the start of the program currently being played back. The R-9 will calculate elapsed time since the previous Start ID. PGM will display "---" if the tape is inserted in-between Start IDs.

REMAIN: When a prerecorded music tape (encoded with "TOC") is being played back, this indicates the time remaining, from the current position to the end of tape. If a TOC is not present, an approximate remaining time will be calculated between the ABS time and the tape length sensors provided on the DAT shell.

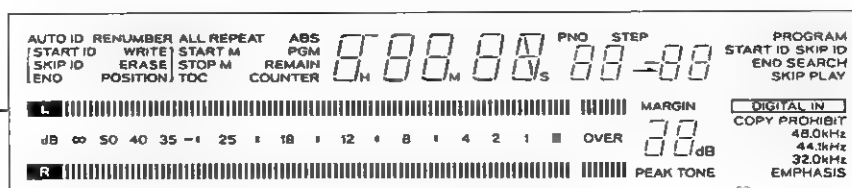
PNO: In PROGRAM and CHECK modes, the PNO display shows the order of a program in the sequence.

STEP: This number displayed to the right of the arrow shows how many times the Skip button has been pressed during SKIP SEARCH. In DIRECT SEARCH mode, it shows the specified PNO being searched for.

NOTE: When recording in LONG REC MODE or playing back a tape that was recorded in LONG REC MODE, multiply indicated hours, minutes, and seconds by two to find actual elapsed or remain time.

5. **Peak Level Meters, L and R:** These meters register input levels during Record Ready, Input Monitor (see #17) or Record mode and, output levels during Play.
6. **MARGIN** is a digital peak-hold meter, showing the available headroom before digital saturation is reached and distortion occurs. It holds the highest reading since MARGIN RESET was last pressed, (or since a new tape has been inserted). It ranges between -39 and 0 dB. During recording, if "0 db" is flashing, it indicates that the meter reached the OVERload point and distortion occurred. The OVER indication can not appear while in playback.
7. **PHONES LEVEL Control:** Adjusts the listening level of the headphones plugged into the jack just below the control.
8. **Headphone Jack:** For connection to stereo headphones only. Don't use 2 conductor mono headphones with this jack.
The built-in headphone amplifier is rated at 100 mW into an 8 ohm load.

4



9. Skip Buttons: Effective in PLAY, PAUSE, and STOP.

When pressed once, the left button rewinds the tape to the beginning of the current program. Press the button repeatedly to skip over several programs.

Similarly, each time the right Skip button is pressed, the tape will be located to the beginning of the next program.

- During a PROGRAM play, the function is limited to the programs in memory.

10. STANDBY Button: When this indicator is lit, the R-9 will automatically enter PAUSE mode instead of play after any of these search operations: PROGRAM PLAY, SKIP, or DIRECT SEARCH. Play will start when PLAY is pressed on the front panel or the remote.

NOTE: The R-9 will automatically leave PAUSE mode after about 8 minutes.

11. REC MUTE Button: Pressing this button during record or record ready (RECORD PAUSE) causes an LED indicator to blink above the RECORD button and the tape to run for 4 seconds, leaving a "no-signal" recording on the tape. Thereafter the deck will automatically enter record ready mode.

12. REW Button: Winds the tape at high speed in reverse.

13. FFWD Button: Similar to REW. The button winds the tape at high speed in the forward direction.

14. STOP Button: Stops any tape motion and disables any function that was on. *Pressing STOP twice erases the PROGRAM memories.* STOP also stops the DAT head drum from spinning against the tape.

15. PLAY Button:

- If pressed while in STOP, starts tape playback.
- If pressed while in record ready (RECORD PAUSE), starts recording.
- If pressed after PAUSE, resumes playback from the point of interruption.
- If pressed while the tray is open, closes the tray and starts play.

16. PAUSE Button:

- Pressing this button in record or play mode temporarily stops the tape. Pressing PLAY resumes record or play accordingly.
- If PAUSE is pressed in stop mode, the deck enters Play Ready mode, waiting for you to press PLAY to start playback.

NOTE: If you interrupt record by pressing PAUSE and leave the unit in that status, the unit will automatically go to "Input Monitor" mode after 8 minutes. To resume record from that mode, press STOP to deactivate the mode, then press again RECORD and PLAY.

If you interrupt play by pressing PAUSE and leave the unit in that status, then the unit goes to STOP after 8 minutes.

17. RECORD Button:

- Pressing this button together with PLAY initiates recording (RECORD LED lit).
- If PAUSE is pressed while pressing RECORD, the deck enters "Record Ready" mode.
- Pressing RECORD alone in STOP mode activates "Input Monitor" (or "Sampling Monitor") mode.

Difference between the "Record Ready" and the "Input Monitor" mode:

Record Ready is a mode accessible by holding RECORD and pressing PAUSE, or by pressing PAUSE after RECORD. The head drum is in motion in this mode. After 8 minutes, the mode is automatically cancelled.

Input Monitor mode is entered by pressing RECORD in STOP (or if you leave the unit in REC PAUSE for 8 minutes). The drum is not in motion. To leave the Input Monitor mode, press STOP.

The Input Monitor mode can be entered even when no cassette is inserted to the deck or a write-protected cassette is inserted.

Depending on whether the input signal is digital or analog, "d-A" or "A-d-A" will show in the display, respectively.

In either mode (Record Ready or Input Monitor), the proper recording levels can be set. The digital outputs of the R-9 are transmitting data in either mode, but are not affected by the REC LEVEL controls.

NOTE: Pressing the *remote* RECORD button alone in STOP has no effect. To activate Input Monitor mode from the remote, hold the remote RECORD and press STOP or, inversely, hold STOP and press RECORD.

18. DATA/SHUTTLE Wheel: The inner DATA wheel is used to enter ■ program number for fast-search or to increment/decrement the ABS time display for trimming ■ Start or Skip ID position. The outer SHUTTLE knob offers high speed cueing; as you rotate the knob to the right, the tape runs forward, and as you rotate the knob to the left the tape runs in reverse, at continuously variable speeds determined by the amount of knob rotation (up to 16 times normal play speed).

19. COUNTER MODE Switch: Each time this switch is pressed the display shows the following information in sequence:

1. Absolute Time: Elapsed time from the beginning of the tape, shown in hours, minutes and seconds. "ABS" lights up in the display.
2. Program Time: Elapsed time from the beginning of each program, shown in hours, minutes and seconds. "PGM" lights up in the display.
3. Remaining Time: Total time remaining on the tape, shown in hours and minutes. "REMAIN" lights up in the display.

- Due to differences between tapes from different manufacturers, available REMAIN time may differ from the display.
- If TOC ("Table Of Contents") exists on the tape, the Remain Time is indicated with second accuracy.

4. Counter: The distance the tape has moved from ■ zero reference point. "COUNTER" lights up in the display.

20. RESET Button: Resets the tape counter to 0000. This button has effect only when the display is switched to Tape Counter mode, as indicated by the appearance of "COUNTER" in the display window.

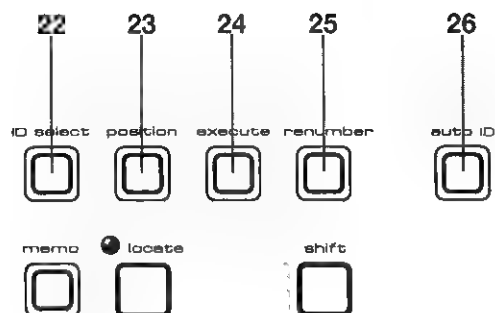
21. MARGIN RESET Button: Defeats a MARGIN (headroom available) indication so new readings can be taken (see no. 6 above).

22. ID SELECT Switch: Each time this switch is pressed (when tape is moving or not) the following ID ("Index") modes are selected in sequence, as indicated by the displays. The modes that can be entered differs depending on the current transport mode as shown.

Transport	ID Mode
Record	START ID WRITE SKIP ID WRITE END ID WRITE
Play/Stop	START ID WRITE* SKIP ID WRITE* START ID ERASE SKIP ID ERASE

* Cannot be executed in STOP.

After the display indicates the desired ID mode, pressing the EXECUTE button (no. 24) will actually execute the ID mode selected. See also the operation section, "Recording".



23. POSITION Button: This allows you to precisely locate a START or SKIP ID marker within 5 frames before performing the WRITE operation. It sets a tentative marker point, allows you to shift the Start/Skip ID marker using the F.FWD and REW buttons or the DATA wheel (within the limits of +/- 50 frames), and allows you to audition the point. See also page 13.

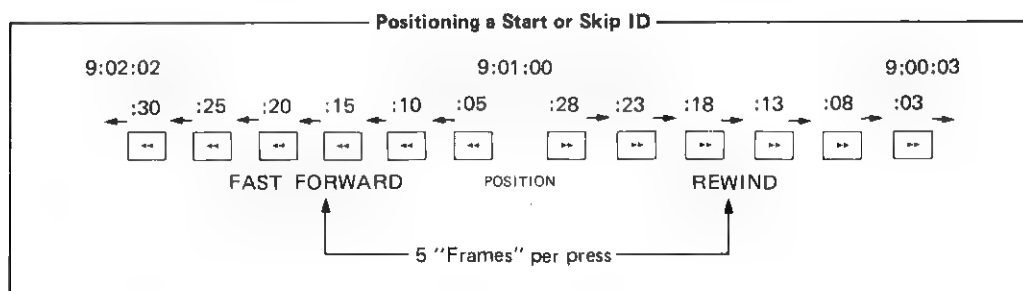
24. EXECUTE Button: Actually executes the ID modes selected by the ID SELECT switch (no. 22).

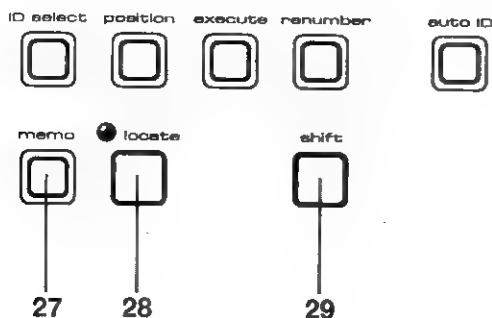
25. RENUMBER Switch: Press to begin the RENUMBER operation and label each START ID with its own Program Number (PNO) in order.

26. AUTO ID Button: When "AUTO ID" is displayed, Start IDs and Program Numbers will be automatically marked in the subcode area of the tape each time a new selection (a silent period followed by signal) begins during recording. AUTO ID works with both digital and analog inputs.

Each time POWER is turned on, the "AUTO ID" indicator should light up in the display, unless the cassette's record protect switch is on.

If you turn the indication off by pressing the AUTO ID button, both Start ID references and Program Numbers are not recorded.





27. MEMO Button: Stores the current ABS time into memory defined as an autolocate point.

28. LOCATE Button: Causes the R-9 to autolocate to a point selected by MEMO.

29. SHIFT Key: Used to alter the function of other keys.

SHIFT + MEMO displays the currently stored autolocation point.

SHIFT + AUTO ID changes the sensitivity level of the AUTO ID circuit.

30. LEC LEVEL Controls, L and R: Valid only for the record level of analog inputs. These controls have no effect during digital source recording.

31. INPUT Select Switch: Selects either the analog input, or the digital input as the source of the R-9. When the switch is set to the DIGITAL position, "DIGITAL IN" will light up in the display window, and the signal at the analog inputs are ignored.

32. REC MODE Switch: With this switch set to LONG, a 60-minute tape offers a 120-minute recording time, a 90-minute tape offers a 180-minute recording time, and so on. When the switch is set to STANDARD, you have the same length of recording time as that labeled on tapes.

You can select the LONG mode only when recording from analog sources or when recording digital sources at a 32- kHz sampling rate.

33. REC LEVEL Select Switch: When the switch is set to REFERENCE, the R-9 sets itself up to work with a nominal 500 mV input level. Normally, you can leave the switch at REFERENCE to achieve recording at optimum level because the output of most of the analog units is meant to operate at this level. But, if your source unit transmits signals at different nominal levels, set the switch to MANUAL so that you can adjust the input level with the REC LEVEL L and R controls.

NOTE: When the switch is set to REFERENCE, make sure that there is no risk of peaks' reaching the OVER area in the peak level meter.

34. SAMPLING FREQUENCY Select Switch: This selects the sampling frequency that will be used for recording analog inputs only. The two frequencies are 44.1 kHz or 48 kHz. 44.1 kHz is the same as the Compact Disc sampling rate, and should be used if the tape will be used as a digital master for CD production. 48 kHz is used in other professional applications.

This switch has no effect when recording from the digital input or during playback. In these cases, the R-9 will automatically switch to the frequency at which those sources were originally recorded, as indicated by 48.0, 44.1 or 32.0 kHz below the word DIGITAL IN in the display.

35. Remote Sensor (Remote Control Infrared Signal Receptor): This receives signals from the provided RC-563 infrared remote control unit.

REAR PANEL

36. DIGITAL IN/OUT (OPTICAL)

OPTICAL IN: Used for digital connection using an optical fiber cable. Used to input digital signals directly from a digital source component.

OPTICAL OUT: Used for digital connection using an optical fiber cable. Used to output digital signals directly from the R-9.

37. **Input Selector:** Set this switch to the OPTICAL position when the digital source component is connected using OPTICAL connectors, and set to the coaxial position when using COAXIAL connectors.

38. **DIGITAL IN/OUT (COAXIAL):** These RCA INPUT and OUTPUT jacks are for connection to the consumer type (SPDIF, IEC 958 type II) digital I/O port of external digital audio equipment through a 75 ohm coaxial cable.

39. **LINE IN:** These RCA jacks are for plugging unbalanced analog sources into the R-9. Nominal input level is 500mV .

40. **LINE OUT:** For connection to the unbalanced analog signal inputs of external equipment. Nominal output level is 500mV .

41. Voltage Selector (general export model)

If it is necessary to change the voltage requirements of the R-9 to match your area, use the following procedure:

1. DISCONNECT POWER LINE CORD.
2. Using a screwdriver, turn the selector until the desired voltage marking appears.

IMPORTANT (for U.K. Customers)

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

If this product is not provided with a mains plug, or one has to be fitted, then follow the instructions given below:

IMPORTANT. DO NOT make any connection to the larger terminal which is marked with the letter E or by the safety earth symbol \equiv or coloured GREEN or GREEN-and-YELLOW.

The wires in the mains lead on this product are coloured in accordance with the following code:

BLUE: NEUTRAL
BROWN: LIVE

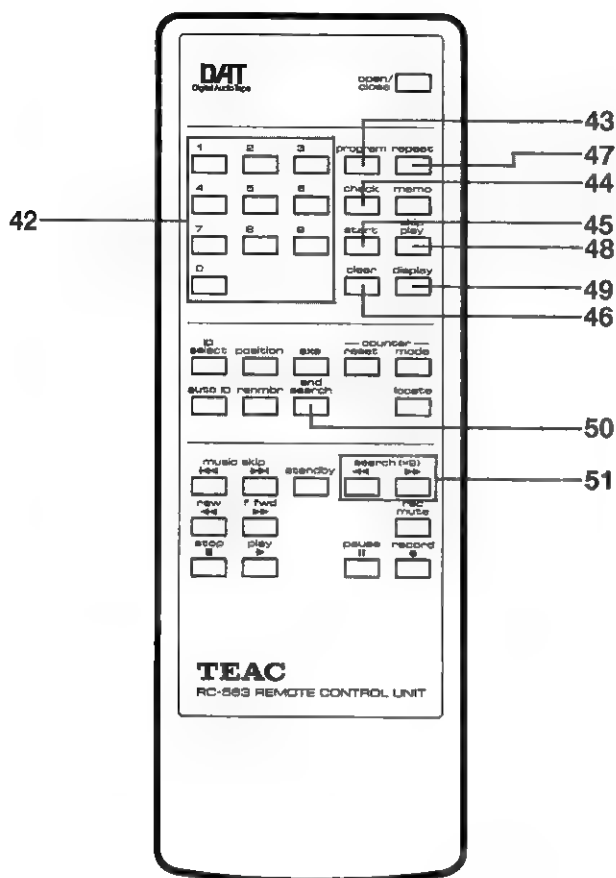
As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

When replacing the fuse only a correctly rated approved type should be used and be sure to re-fit the fuse cover.

IF IN DOUBT — CONSULT A COMPETENT ELECTRICIAN.



RC-563 REMOTE CONTROL UNIT

Descriptions are limited to the functions whose duplicate is not on the R-9 deck.

42. **Numeric Keypad:** Used to designate program numbers for direct search, or for programmed play.
43. **PROGRAM Key:** Puts into memory the programs you designate with the numeric keypad for programmed play.
44. **CHECK Key:** This key is active in PROGRAM mode. Each time this key is pressed the next program number in memory appears in the display, next to its STEP number in a sequence (for example, "STEP 09 4" means the ninth selection in the sequence will be song #4 on the tape).

NOTE: CHECK has no effect when a PROGRAM sequence is playing.

For more information see page 9, Programed Sequence Play.

45. **START Button:**
 - 1) **PROGRAM PLAY START:** Pressed after you have put into memory the desired programs, this button will start playing the sequence.

- 2) **DIRECT SEARCH START:** Pressed after you have designated the desired single program with the numeric keypad, this button causes the tape to locate to the beginning of that program ("SEARCH" blinking), and as soon as that point is reached, the deck will automatically enter play mode (or, if STANDBY is on, go into PAUSE).

46. **CLEAR Button:** Used to erase the last entered program from memory.
(To erase the entire PROGRAM sequence and re-enter normal status, press STOP.)

CLEAR is also used to clear any number displays you entered with the numeric keypad.

47. **REPEAT Button:** Initiates a repeat play. When pressed once, the button enables a single program to play over and over. Pressing the button twice enables the whole tape repeat. Or, in a PROGRAM play, pressing the REPEAT button once has the same effect as pressing the button twice and the whole sequence of programs currently in memory will repeat.

REPEAT can be pressed during play or before starting play.

48. **SKIP PLAY Button:** Causes the tape to interrupt play each time a skip index is detected and fast wind to the next start index. This is indicated by "SKIP PLAY" in the display. A second press disables the function.
49. **DISPLAY Switch:** Varies the display brightness in 4 steps.
50. **END SEARCH Button:** Pressing this button in play, play pause or stop, will fast forward the tape, stopping it at the beginning of End ID reference. If this index does not exist, the tape will stop at the beginning of the "unformatted" section.
51. **SEARCH Buttons:** Pressing these buttons in play causes the tape to run at 9X normal play speed in the corresponding direction for as long as you hold the buttons.

Batteries

Battery installation

- 1) Slide open the battery compartment cover.
- 2) Make sure that the (+) and (-) poles are positioned correctly.
- 3) Replace the battery compartment cover.

Battery replacement

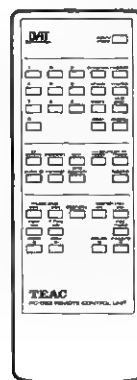
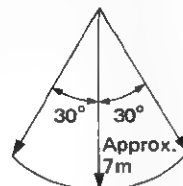
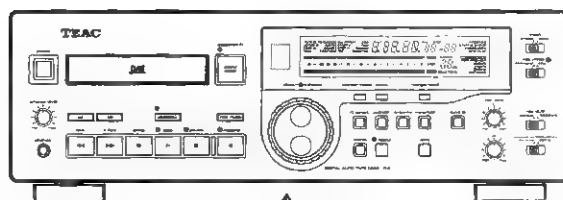
If you notice that the distance between the remote control unit and the R-9 at which correct operation is possible becomes shorter, it indicates that the batteries are nearly exhausted. In this case, replace both batteries with new ones.

Precautions concerning batteries

- Be sure to insert the batteries with correct positive (+) and negative (-) polarities as indicated in the battery compartment.
- Do not use an old battery and a new battery at the same time.
- Use batteries of the same type. Never use batteries of different types together, even when they have the same shape.
- Both rechargeable and non-rechargeable batteries can be used. Refer to the precautions on their labels before use.
- Do not heat or disassemble batteries and never dispose of old batteries by throwing them in a fire.

Notes on use

- Even if the remote control is operated within the effective range, remote control operation may be impossible if there is any obstacle between the R-9 and the remote control unit or if it is outside the effective angle.
- If the remote control unit is operated near other appliances which generate infrared rays, or if other remote controls using infrared rays are used near the R-9, it may operate incorrectly. The opposite is also true, and other appliances may work incorrectly.
- Do not place books or other objects on the remote control unit as they could press its buttons and the batteries would become exhausted more quickly.
- When the remote control unit is not to be used for an extended period (more than a month), remove its batteries to prevent them from leaking.
If leakage occurs, wipe away the liquid inside the battery compartment and replace the batteries with new ones.



THIS DIGITAL APPARATUS DOES NOT EXCEED THE CLASS B LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS AS SET OUT IN THE RADIO INTERFERENCE REGULATIONS OF THE CANADIAN DEPARTMENT OF COMMUNICATIONS.

LE PRESENT APPAREIL NUMERIQUE N'EMET PAS DE BRUITS RADIOELECTRIQUES DEPASSANT LES LIMITES APPLICABLES AUX APPAREILS NUMERIQUES DE CLASSE B PRESCRITES DANS LE REGLEMENT SUR LE BROUILLAGE RADIOELECTRIQUE EDCITE PAR LE MINISTERE DES COMMUNICATIONS DU CANADA.

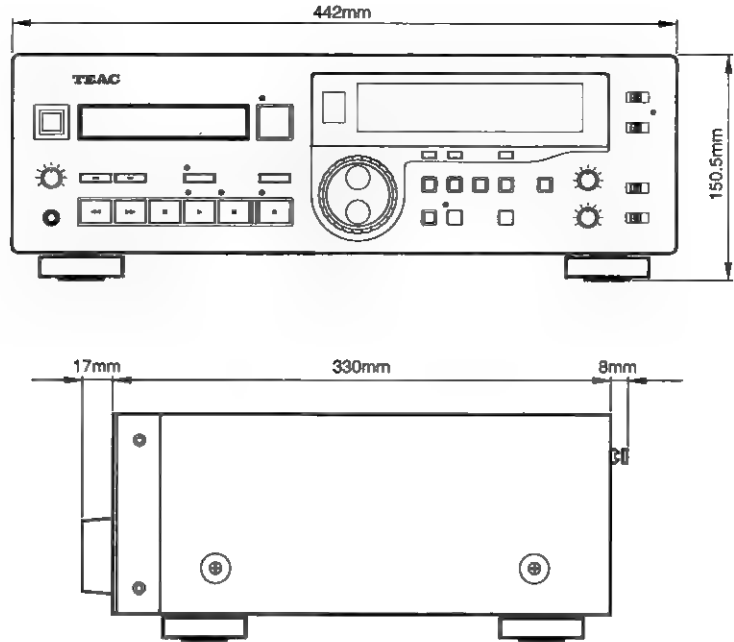
Specifications

Category:	Rotary Head Digital Audio Tape Recorder
Tape Speed:	8.15 mm/sec. in STANDARD mode (play speed of 12.225 mm/sec. also supported)/4.075 mm/sec. in LONG mode
Record Time:	120 minutes in STANDARD/240 minutes in LONG (with 120-min cassette)
Head Drum Speed:	2,000 rpm in STANDARD/1,000 rpm in LONG (during Record)
Fast Winding:	70 seconds (approx.) (with R-120 cassette)
Error Correction:	Octet (eightfold) correction
Channel Number:	2
Quantization Bit:	16 bit linear in STANDARD/12 bit non-linear in LONG
Sampling Rate:	48 kHz (in play/record, digital/analog) 44.1 kHz (in play/record, digital/analog) 32 kHz (in play/record, digital only in STANDARD, digital/analog in LONG)
Frequency Response:	10-22,000 Hz \pm 0.5 dB in STANDARD 10-14,500 Hz \pm 0.5 dB in LONG
Signal-to-Noise Ratio:	Better than 92 dB
Dynamic Range:	Better than 93 dB
Total Harmonic Distortion:	Less than 0.004% (1 kHz, in STANDARD) Less than 0.07% (1 kHz, in LONG)
Channel Separation:	Better than 85 dB (at 1 kHz)
Wow and Flutter:	Unmeasurable (less than \pm 0.001%)
Input	
Analog	RCA jack x 2
Nominal Input Level:	500 mV
Input Impedance:	50k ohms unbalanced
Digital	Coaxial x 1 Optical x 1
Output	
Analog	RCA jack x 2
Maximum Output Level:	2.0 volts
Nominal Output Level:	500 mV
Output Impedance:	430 ohms unbalanced
PHONES:	1/4" jack x 1
Output Level:	100 mW + 100 mW (8-ohm load)
Digital	Coaxial x 1 Optical x 1
Power Requirements	
USA/CANADA:	120 V AC, 60 Hz
U.K./AUSTRALIA:	230 V AC, 50 Hz
EUROPE:	230 V AC, 50 Hz
General Export Model:	100/120/230/240 V AC, 50-60 Hz
Consumption:	28 Watts
Dimensions (WxHxD):	442 x 150.5 x 355 mm (17.3/8" x 6.3/32" x 14")
Weight:	About 9.3 kg (20.50 lbs)

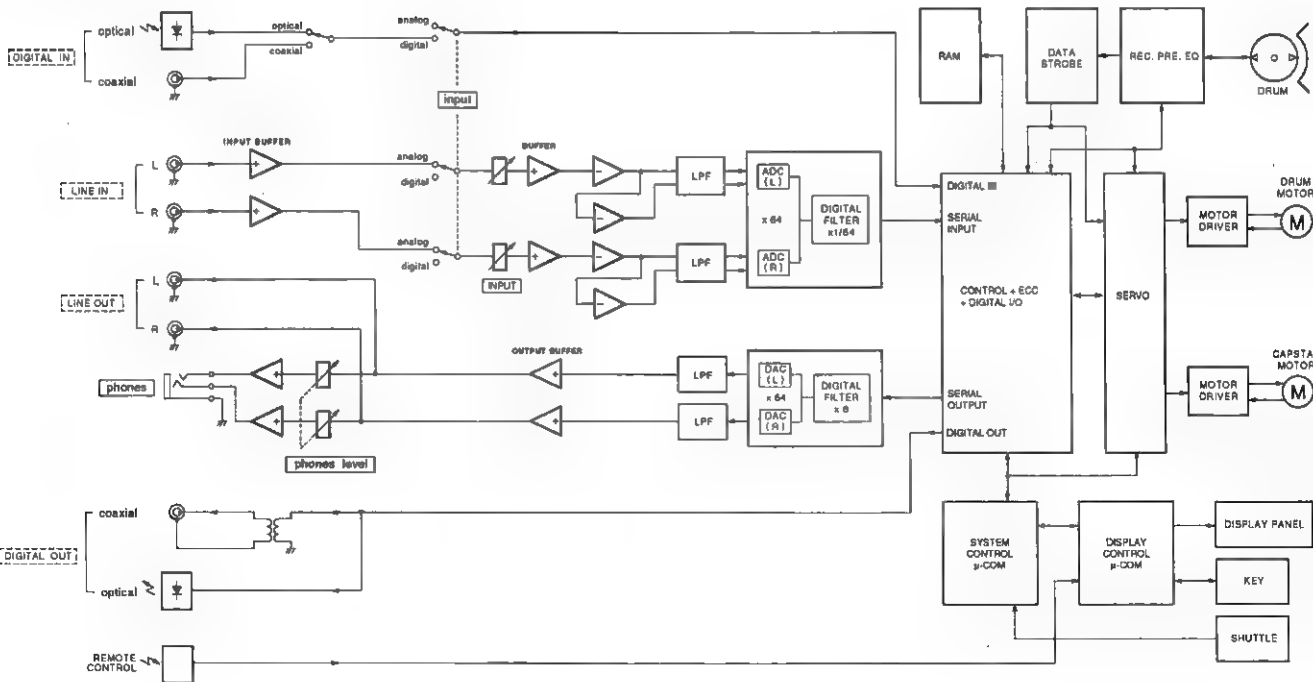
<Standard Accessories Provided>

- Wireless Remote Control Unit RC-563
- Batteries (SUM-3, "AA", "R6") x 2
- Input-output connection cord (RCA type) x 2
- Improvements may result in specification or feature changes without notice.
- Photos and illustrations may differ slightly from production models.
- Specifications were determined using a sampling frequency of 48 kHz.

R-9 External Dimensions



Block Diagram



Mode Formats

Item	Mode	Record/play mode				Play exclusive mode
Number of channels		2	2	2	2	2
Sampling rate (kHz)		48	44.1	32	32	44.1
Number of quantization bits		16 (linear)	16 (linear)	16 (linear)	12 (non linear)	16 (linear)
Linear recording density (KBPI)		61.0	61.0	61.0	61.0	61.1
Surface recording density (MBPI ²)		114	114	114	114	76
Transmission rate (MBPS)		2.46	2.46	2.46	1.23	2.46
Subcode capacity (KBPS)		273.1	273.1	273.1	136.5	273.1
Modulation		8-10 conversion				
Correction		Dual Reed Solomon				
Tracking		Area split ATF				
Cassette size (mm)		73 x 54 x 10.5				
Recording time* (min)		120	120	120	240	80
Tape width (mm)		3.81				
Tape type		Metal-pulverized				Oxide
Tape thickness (μ)		13±1μ				
Tape speed (mm/s)		8.15	8.15	8.15	4.075	12.225
Track pitch (μm)		13.591				20.41 (wide track)
Track angle		6°22'59"5				6°23'29"4
Standard drum		ø30 90° wrap				
Drum revolution speed (r.p.m.)		2000			1000	2000
Relative speed (m/s)		3.133			1.567	3.129
Head azimuth		±20° ±15°				

*with 120-min tape

Sampling Rates Supported

Sampling Rate (Quantization Bit)		48 kHz (16 bit linear)	44.1 kHz (16 bit linear)	32 kHz (16 bit linear)	32 kHz* (12 bit non-linear)
Record	Analog Input	Yes	Yes	No	Yes
	Digital Input	Yes	Yes	Yes	Yes
Play		Yes	Yes	Yes	Yes

*LONG REC MODE

For CANADA

AC POWER CORD CONNECTION

CAUTION:

TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

CORDE DE CONNEXION CA

ATTENTION:

POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

Problems and Solutions

Incident	Cause	Suggestion/Measures
No control can operate.	It is normal that the unit doesn't function for about 3 seconds after powering up	Wait until "COUNTER" lights up in the display window.
PAUSE doesn't interrupt recording.	Start ID is being recorded (during which only STOP can operate).	—
The tape stops playing unexpectedly and starts running at high speed.	SKIP PLAY is activated.	Press SKIP PLAY to disable the function.
One cannot skip to a specific program. A sequence of programs cannot play as programmed.	Programs are not numbered contiguously.	Renumber them as explained on page 14.
The desired ID mode cannot be selected with ID SELECT.	The ID mode you can select depends on the current transport mode.	See table on page 17.
Start IDs are not automatically recorded together with audio programs.	AUTO ID mode is not entered ("AUTO" not lit in the display window).	Press AUTO ID.
One cannot edit Start IDs, Skip IDs or program numbers in Play mode.	The write protect switch on the cassette is set to the open position.	Set the switch to the close position (for location of the switch, see page 6).
ABS time was not recorded.	Audio recording started not from the beginning of the tape or it added to the end of the existing audio recordings but started from a point beyond the end of the previously recorded ABS time numbers.	Rewind the tape to the very beginning before starting to record or use the remote END SEARCH function to locate the tape to the beginning of the "unformatted" section.
Sampling frequency indication blinks.	Connection is wrong on the part of the digital source unit or it is switched off.	Check the connection and switch on power to the unit.
Autolocation does not occur.	No locate point is selected.	Set the point (p.8).
	ABS time is not available on the tape.	See the row "ABS time was not recorded" above.
Pressing MEMO does not set any location.	ABS time is not available on the tape.	See the row "ABS time was not recorded" above.

Coded Error Messages Explained

Coded Message	Problem	Remedy
Error 00	Condensation on the drum.	Leave the unit turned on for 1 or 2 hours.
	Error in drum functions.	Turn the unit off, then turn it on again. If the message does not go out, repeat the on/off switching several times. If the message still persists, please contact TEAC or your nearest TEAC dealer.
Error 01	Error in tape loading mechanism.	
Error 02	Error in reel/capstan motors.	
Error 03	Tape is broken or unacceptably thin. (Too-thin tape of 180 minutes or more may inhibit normal operation, and may break or tangle within the tape travel mechanism.)	Replace the tape with a tape of 120 minutes or less.
Error 04	The R-9 cannot record normally due to abnormality in accuracy of incoming digital sampling rate (Fs) data.	Check to see if sampling frequency accuracy exceeds ± 1000 ppm at the source. If it does, input the digital signal with a normal sampling frequency.

NOTE : When Error 01, Error 02, or Error 03 is indicated, all controls except OPEN/CLOSE are inoperable.

PANNEAU AVANT

1. Interrupteur d'alimentation (POWER): Contrôle l'alimentation de la R-9. Quand l'alimentation est mise avec une bande chargée, l'affichage du compteur montrera les indications suivantes:

- **Temps absolu ("ABS")**
Si la bande est vierge et ne contient pas d'information ABS, le compteur sera commuté sur le mode compteur de bande, indiqué par "COUNTER".
- **Numéro de programme courant ("PNO")**
Si "---" est indiqué à la place d'un nombre, ceci montre que le programme n'est pas numéroté ou la bande est située à un point dans-entre des marques PNO.
- **Indicateur "AUTO ID"** (sauf si le commutateur de protection d'écriture est mis sur protection).
- **Le taux d'échantillonnage de la bande pré-enregistrée sera affiché.**
- **Si le commutateur INPUT est dans la position DIGITAL, "DIGITAL IN" sera allumé.**

Quand l'alimentation est coupée, toutes les mémoires (PGM et localisation automatique) sont effacées.

2. Plateau de cassette: Pour le chargement de seulement des cassettes DAT. Les cassettes audio normales ne sont pas acceptables.

3. Touche d'ouverture/fermeture (OPEN/CLOSE) et indicateur de cassette (CASSETTE IN): Quand la touche est d'abord pressée le plateau de cassette sort et l'indicateur CASSETTE IN commencera à clignoter. Après avoir chargé une cassette, une nouvelle pression sur la touche fera rentrer le plateau et l'indicateur s'allumera en continu.
La touche OPEN/CLOSE peut faire sortir le plateau même si une bande est en cours de lecture. Bien faire attention de ne pas presser accidentellement sur cette touche.

4. Fenêtre d'affichage: Vous fournit une variété d'informations/messages, vous maintenant informés de ce qui a lieu actuellement.

ABS: Indique la durée écoulée du début de la bande jusqu'à la position courante. "Si "--- ---" est affiché en mode ABS, la bande n'a pas été enregistrée avec des données ABS.

Pendant le mode POSITION, la position d'image DAT est affichée en chiffres plus petits près de l'affichage des secondes. POSITION peut ajuster ce point dans des intervalles de 5 images.

PGM: Indique la durée écoulée à partir du début du programme en cours de lecture. La R-9 calculera la durée écoulée depuis l'identification de début précédente. PGM affichera "-- ---" si la bande est introduite dans-entre des identifications de début.

REMAIN: Quand une bande de musique pré-enregistrée (encodée avec "TOC") est lue, ceci indique la durée restante, de la position courante à la fin de la bande. S'il n'y a pas de TOC, une durée restante approximative sera calculée entre la durée ABS et les capteurs de longueur de bande prévus sur la coque DAT.

PNO: En modes PROGRAM et CHECK, l'affichage PNO montre l'ordre d'un programme dans une séquence.

STEP: Ce nombre affiché à la droite de la flèche montre le nombre de fois que la touche Skip a été pressée en recherche de saut (SKIP SEARCH). En mode de recherche directe (DIRECT SEARCH), il montre le PNO spécifié à chercher.

REMARQUE: En enregistrant en mode longue durée (LONG REC MODE) ou en lisant une bande qui a été enregistrée dans ce mode, multiplier par deux les heures, minutes et secondes indiquées pour trouver la durée réelle écoulée ou restante.

5. Indicateurs de niveau crête gauche (L) et droit (R): Ces indicateurs donnent les niveaux d'entrée dans les modes prêt à enregistrer, de monitoring d'entrée (voir #17) et d'enregistrement et, les niveaux de sortie pendant la lecture.

6. MARGIN est un indicateur à maintien de crête numérique, montrant la marge disponible avant que la saturation numérique soit atteinte et que la distortion se produise. Il conserve la plus haute valeur depuis la dernière pression sur MARGIN RESET, (ou depuis qu'une nouvelle bande a été introduite). Sa plage est entre -39 et 0 dB. Pendant l'enregistrement, si "0 dB" clignote, il indique que l'indicateur a atteint le point de dépassement OVER et qu'une distortion s'est produite. L'indication OVER ne peut pas apparaître en lecture.

7. Commande de niveau PHONES LEVEL: Ajuste le niveau d'écoute du casque d'écoute branché à la prise juste au-dessous de la commande.

8. Prise de casque d'écoute PHONES: Pour le raccordement d'un casque d'écoute stéréo uniquement. Ne pas utiliser un casque d'écoute mono 2 conducteurs avec cette prise. L'amplificateur de casque incorporé est conçu pour 100 mW sous une charge de 8 ohms.

9. Touches de saut (Skip): Fonctionnent en lecture, en pause et à l'arrêt. Pressée une fois, la touche de gauche fait réembobiner la bande au début du programme courant. Appuyer plusieurs fois sur la touche pour sauter plusieurs programmes.

De même, chaque fois que la touche Skip de droite est pressée, la bande sera avancée jusqu'au début du programme suivant.

- En lecture programmée, la fonction est limitée aux programmes en mémoire.

10. Touche STANDBY: Quand cet indicateur est allumé, la R-9 passera automatiquement en mode de PAUSE au lieu de la lecture après une de ces opérations de recherche: PROGRAM PLAY, SKIP, ou DIRECT SEARCH. La lecture commencera quand PLAY est pressée sur le panneau avant ou sur la télécommande.

REMARQUE: La R-9 sortira automatiquement du mode de PAUSE au bout de 8 minutes.

11. Touche REC MUTE: Une pression sur cette touche pendant l'enregistrement ou prêt à enregistrer (RECORD PAUSE) fait clignoter un indicateur à diode LED au-dessus de la touche RECORD et fait défiler la bande pendant 4 secondes, laissant un enregistrement "sans signal" sur la bande. Après la platine passera automatiquement en mode prêt à enregistrer.

12. Touche REW:
Fait défiler la bande à grande vitesse en sens inverse si pressée dans le mode d'arrêt.

13. Touche F.FWD: Similaire à REW.
La touche fait défiler la bande à grande vitesse en sens avant.

14. Touche STOP: Arrête tout mouvement de la bande et annule toute fonction engagée. Appuyer deux fois sur STOP efface les mémoires PROGRAM. STOP fait également arrêter la rotation du tambour de tête DAT contre la bande.

15. Touche PLAY:

- a) Si pressée dans le mode d'arrêt, lance la lecture de la bande.
- b) Si pressée en attente d'enregistrement (RECORD PAUSE), lance l'enregistrement.
- c) Si pressée après PAUSE, reprend la lecture du point d'interruption.
- d) Si pressée alors que le plateau est ouvert, ferme le plateau et lance la lecture.

16. Touche PAUSE:

- a) Une pression sur cette touche en mode d'enregistrement ou de lecture arrête temporairement la bande. Une pression sur PLAY relance l'enregistrement ou la lecture selon le cas.
- b) Si PAUSE est pressée en mode d'arrêt, la platine passe en mode prêt pour la lecture, attendant de vous une pression sur PLAY pour lancer la lecture.

REMARQUE: Si vous interrompez l'enregistrement en appuyant sur PAUSE et vous laissez l'appareil dans cet état, l'appareil passera automatiquement en mode de "Surveillance d'entrée" au bout de 8 minutes. Pour reprendre l'enregistrement à partir de ce mode, appuyer sur STOP pour sortir de ce mode, puis appuyer à nouveau sur RECORD et PLAY.

Si vous interrompez la lecture en appuyant sur PAUSE et vous laissez l'appareil dans cet état, l'appareil passera automatiquement en mode d'arrêt au bout de 11 minutes.

17. Touche d'enregistrement (RECORD):

- a) Appuyer sur cette touche ensemble avec PLAY lance l'enregistrement.
- b) Si PAUSE est pressée tout en pressant RECORD, la platine passe en mode "prêt à enregistrer".
- c) Une pression sur RECORD seule dans le mode d'arrêt active le mode "surveillance d'entrée" (ou "surveillance de l'échantillonnage").

Différence entre les modes "prêt à enregistrer" et "surveillance d'entrée":

Prêt à enregistrer est un mode accessible en maintenant RECORD et en appuyant sur PAUSE, ou en pressant PAUSE après RECORD. Le tambour de tête est en mouvement dans ce mode. Au bout de 8 minutes, le mode est automatiquement annulé.

Le mode de **Surveillance d'entrée** est entré en appuyant sur RECORD en mode d'arrêt (ou si vous laissez l'appareil en pause d'enregistrement pendant 8 minutes). Le tambour n'est pas en rotation. Pour sortir du mode de Surveillance d'entrée, appuyer sur STOP.

Le mode de Surveillance d'entrée peut être entré même sans cassette dans la platine ou quand une cassette protégée en écriture est introduite.

En fonction du signal d'entrée numérique ou analogique, respectivement, "d-A" ou "A-d-A" sera affiché.

Dans un mode ou l'autre, les niveaux d'enregistrement corrects peuvent être réglés. Les sorties numériques de la R-9 transmettent des informations dans un mode ou l'autre, mais ne sont pas affectées par les commandes de niveau REC LEVEL.

REMARQUE: Une pression sur la touche RECORD seule de la télécommande dans le mode d'arrêt n'a pas d'effet. Pour activer le mode de monitoring d'entrée à partir de la télécommande, maintenir RECORD de la télécommande et appuyer sur STOP ou, inversement, maintenir STOP et appuyer sur RECORD.

18. Molette DATA/SHUTTLE: La molette interne DATA est utilisée pour entrer un numéro de programme pour la recherche rapide ou pour augmenter/diminuer la valeur du temps ABS pour régler sur une position d'identification de début ou de saut. Le bouton extérieur SHUTTLE offre la recherche à grande vitesse; en tournant le bouton sur la droite, la bande défile en avant, et en tournant le bouton sur la gauche, la bande défile en sens inverse, à des vitesses variables en continu déterminées par l'angle de rotation du bouton (jusqu'à 16 fois la vitesse de lecture normale).

19. Commutateur de mode de compteur (COUNTER MODE): Chaque fois que ce commutateur est pressé, l'affichage montre l'information suivante en séquence:

1. Temps absolu: Durée écoulée depuis le début de la bande, montrée en heures, minutes et secondes. "ABS" s'allume dans l'affichage.
2. Durée programmée: Durée écoulée depuis le début de chaque programme, montrée en heures, minutes et secondes. "PGM" s'allume dans l'affichage.
3. Durée restante: Durée totale restante sur la bande, montrée en heures et minutes. "REMAIN" s'allume dans l'affichage.

- A cause de différences entre des bandes de différents fabricants, la durée REMAIN réelle peut être différente de l'indication dans l'affichage.

- Si un TOC ("tableau du contenu") existe sur la bande, la durée restante est indiquée avec une précision de la seconde.

4. Compteur: La distance que la bande s'est déplacée depuis le point de référence zéro. "COUNTER" s'allume dans l'affichage.

20. Touche de remise à zéro du compteur (RESET): Remet le compteur de bande à 0000. Cette touche a de l'effet seulement quand l'affichage est commuté dans le mode de compteur de bande, comme indiqué par l'apparition de "COUNTER" dans la fenêtre d'affichage.

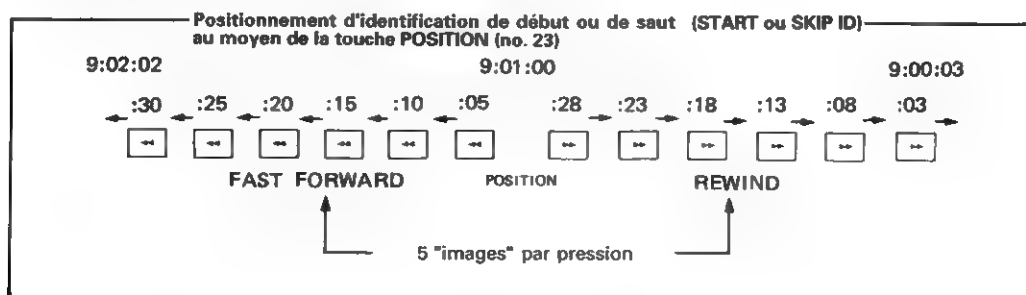
21. Touche MARGIN RESET: Annule l'indication MARGIN (marge disponible) ainsi de nouvelles lectures peuvent prendre place (voir no. 6 précédemment).

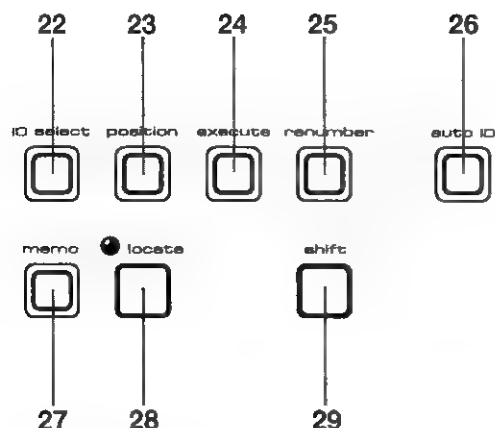
22. Commutateur ID SELECT: Chaque fois que ce commutateur est pressé (quand la bande se déplace ou non) les modes ID ("Index") sont sélectionnés en séquence, comme indiqué par les affichages. Les modes qui peuvent être entrés diffèrent selon le mode de transport courant comme montré.

Transport	Mode ID
Enregistrement	START ID WRITE SKIP ID WRITE END ID WRITE
Lecture/arrêt	START ID WRITE* SKIP ID WRITE* START ID ERASE SKIP ID ERASE

*Ne peut être exécuté à l'arrêt.

Après que l'affichage indique le mode ID désiré, une pression sur la touche EXECUTE (no. 24) exécutera réellement le mode ID sélectionné.





23. Touche POSITION: Elle vous permet de localiser précisément une marque START ou SKIP ID dans les 5 images avant d'effectuer l'opération WRITE. Elle règle une tentative de point de marquage, vous permet de décaler la marque START/SKIP ID en utilisant les touches F.FWD et REW (dans les limites de ± 50 images), et vous permet l'audition du point.

24. Touche EXECUTE: Exécute réellement les modes ID sélectionnés par le commutateur ID SELECT (no. 22).

25. Commutateur RENUMBER: Appuyer pour commencer l'opération de renumérotation et marquer chaque START ID avec son propre numéro de programme (PNO) dans l'ordre.

26. Touche AUTO ID: Quand "AUTO ID" est affiché, les identifications de début et les numéros de programme seront marqués automatiquement dans la zone de sous-code de la bande chaque fois qu'une nouvelle sélection (une période de silence suivie de signal) commence pendant l'enregistrement. AUTO ID fonctionne avec les deux entrées numérique et analogique.

Chaque fois que l'alimentation est mise, l'indicateur "AUTO ID" peut s'allumer dans l'affichage, sauf si la protection d'enregistrement de la cassette est mise.

Si vous coupez l'indication en pressant sur la touche AUTO ID, les références d'identification de début et les numéros de programme ne sont pas enregistrés.

27. Touche MEMO: Range le temps ABS courant en mémoire défini comme un point de localisation automatique.

28. Touche LOCATE: Permet à la R-9 de localiser automatiquement le point sélectionné par MEMO.

29. Touche SHIFT: Utilisée pour changer la fonction des autres touches.

La combinaison SHIFT + MEMO affiche le point de localisation automatique actuellement en mémoire.

La combinaison SHIFT + AUTO ID change le niveau de sensibilité du circuit AUTO ID.

30. Commandes de niveau d'entrée (REC LEVEL), gauche (L) et droite (R): Valables seulement pour le niveau d'enregistrement des entrées analogique.

Ces commandes n'ont pas d'effet pendant l'enregistrement de source numérique.

31. Sélecteur d'entrée (INPUT): Sélectionne l'entrée numérique ou analogique comme source de la R-9. Quand le commutateur est réglé sur la position DIGITAL, "DIGITAL IN" s'allumera dans la fenêtre d'affichage, et les signaux des entrées analogiques sont ignorés.

32. Commutateur REC MODE: Avec ce commutateur réglé sur LONG, une bande de 60 minutes offre une durée d'enregistrement de 120 minutes, une bande de 90 minutes offre une durée d'enregistrement de 180 minutes, et ainsi de suite. Quand le commutateur est réglé sur STANDARD, vous avez la même longueur d'enregistrement que celle indiquée sur les bandes.

Vous pouvez sélectionner le mode LONG seulement en enregistrant à partir de sources analogiques ou en enregistrant des sources numériques avec une fréquence d'échantillonnage de 32 kHz.

33. Sélecteur REC LEVEL: Quand le sélecteur est réglé sur REFERENCE, la R-9 se règle pour fonctionner avec un niveau d'entrée nominal de 500 mV. Normalement, vous pouvez laisser le sélecteur sur REFERENCE pour obtenir un enregistrement au niveau optimal car la sortie de la plupart des appareils analogiques est conçue pour fonctionner à ce niveau. Mais, si votre appareil source transmet des signaux à des niveaux nominaux différents, régler le sélecteur sur MANUAL, ainsi vous pourrez ajuster le niveau d'entrée avec les commandes REC LEVEL L et R.

REMARQUE: Si le sélecteur est réglé sur REFERENCE, s'assurer qu'il n'y a pas de risque de crêtes atteignant la zone OVER dans l'indicateur de niveau de crête.

34. Sélecteur de fréquence d'échantillonnage (SAMPLING FREQUENCY): Il sélectionne la fréquence d'échantillonnage qui sera utilisée pour l'enregistrement d'entrées analogiques uniquement. Les deux fréquences sont 44,1 kHz et 48 kHz. 44,1 kHz est la fréquence d'échantillonnage des disques audionumériques, et doit être utilisée si la bande

est à utiliser comme bande mère numérique pour la production CD. 48 kHz est utilisée dans d'autres applications professionnelles.

Ce sélecteur n'a pas d'effet en enregistrant à partir d'une entrée numérique ou en lecture. Dans ces cas, la R-9 commutera automatiquement sur la fréquence à laquelle ces sources ont été enregistrées, comme indiqué par 48.0, 44.1 ou 32.0 kHz sous le mot DIGITAL sur l'affichage.

- 35. Récepteur du signal infrarouge de télécommande:** Il reçoit les signaux du boîtier de télécommande RC-563 fourni.

PANNEAU ARRIERE

- 36. Connecteurs optiques d'entrée/sortie numérique (DIGITAL IN/OUT OPTICAL)**
Entrée optique (OPTICAL IN): Utilisée pour le raccordement numérique en utilisant un câble à fibre optique. Utilisée pour entrer des signaux numériques directement d'un appareil source numérique.
Sortie optique (OPTICAL OUT): Utilisée pour le raccordement numérique en utilisant un câble à fibre optique. Utilisée pour sortir des signaux numériques directement de la R-9.

- 37. Sélecteur d'entrée:** Régler ce sélecteur sur la position OPTICAL quand l'appareil source numérique est raccordé en utilisant les connecteurs OPTICAL, et régler sur la position COAXIAL en utilisant les connecteurs COAXIAL.

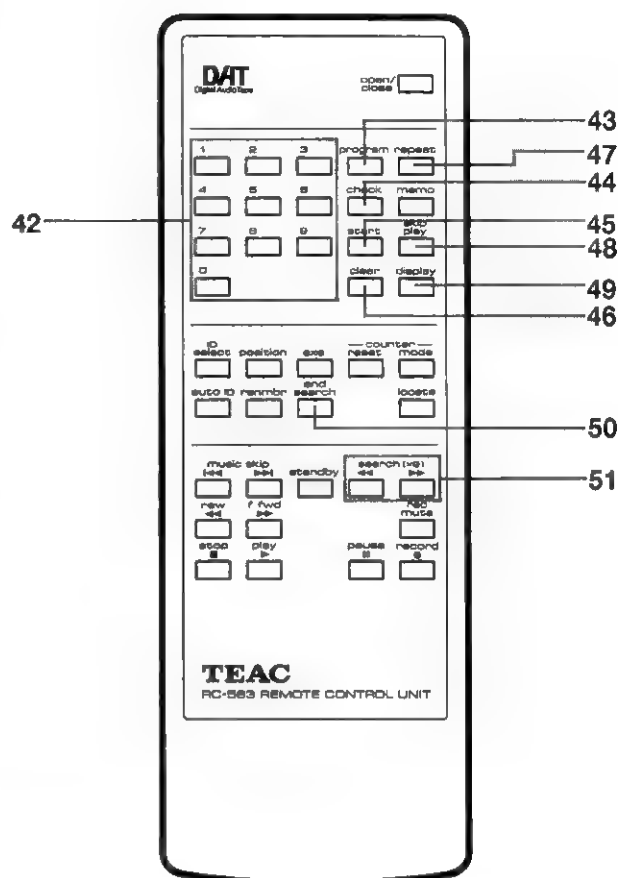
- 38. Connecteurs d'entrée/sortie numérique coaxiale (DIGITAL IN/OUT COAXIAL):** Ces prises d'entrée et de sortie RCA sont pour le raccordement à un port I/O numérique type grand public (SPDIF, IEC 958 type II) d'un appareil audio numérique externe par un câble coaxial de 75 ohms.

- 39. Connecteurs d'entrée ligne (LINE IN):** Ces prises RCA sont pour le branchement de sources analogiques asymétriques à la R-9. Le niveau d'entrée nominal est 500mV .

- 40. Connecteurs RCA LINE OUT:** Pour le raccordement vers les entrées de signal analogique asymétrique d'un appareil externe. Le niveau de sortie nominal est 500mV .

- 41. Sélecteur de tension (modèle d'exportation générale)**
 S'il est nécessaire de changer les besoins en tension du lecteur pour l'adapter à votre région, suivre la procédure suivante:

- 1. DEBRANCHER LE CORDON D'ALIMENTATION.**
- En utilisant un tournevis, tourner le sélecteur jusqu'à l'apparition du marquage de la tension voulue.



BOITIER DE TELECOMMANDE RC-563

Les descriptions sont limitées aux fonctions qui ne sont pas sur la platine R-9 .

- 42. Clavier numérique:** Utilisé pour désigner les numéros de programme pour la recherche directe, ou pour la lecture programmée.
- 43. Touche PROGRAM:** Met en mémoire les programmes que vous définissez avec le clavier numérique pour la lecture programmée.
- 44. Touche CHECK:** Cette touche est active en mode PROGRAM. Chaque fois que cette touche est pressée le numéro du programme suivant en mémoire apparaît dans l'affichage, près de son nombre STEP dans une séquence (par exemple, "STEP 09 4" signifie que la neuvième sélection dans la séquence sera jouée #4 sur la bande).

REMARQUE: CHECK n'a pas d'effet quand une séquence PROGRAM est lue.

45. Touche START:

- 1) **PROGRAM PLAY START:** Pressée après avoir mis en mémoire les programmes voulus, cette touche lancera la lecture de la séquence.
- 2) **DIRECT SEARCH START:** Pressée après avoir défini le seul programme voulu avec le clavier numérique, cette touche fait défiler la bande jusqu'au début de ce programme ("SEARCH" clignotant), et dès que ce point est atteint, la platine passe automatiquement en mode de lecture (ou, si **STANDBY** est allumé, va en mode de **PAUSE**).

46. Touche CLEAR: Utilisée pour effacer le dernier programme entré en mémoire.
(Pour effacer la séquence programmée complète et revenir en mode normal, appuyer sur **STOP**.)

CLEAR est également utilisée pour effacer tout affichage de nombre entré avec le clavier numérique.

47. Touche REPEAT: Initialise une lecture répétée. Pressée une fois, la touche permet à un seul programme d'être lu et relu encore et encore. Presser la touche deux fois permet la répétition de la bande complète. Ou, dans une lecture programmée, presser la touche **REPEAT** une fois a le même effet que presser la touche deux fois et la séquence complète des programmes en mémoire sera répétée.

REPEAT peut être pressée pendant la lecture ou avant de commencer la lecture.

48. Touche de saut de lecture (SKIP PLAY): Fait interrompre la lecture sur la bande chaque fois qu'un index de saut est détecté pour faire défiler rapidement la bande jusqu'au prochain index de début. C'est indiqué par "**SKIP PLAY**" sur l'affichage. Une seconde pression annule cette fonction.

49. Commutateur DISPLAY: Fait varier la luminosité de l'affichage dans 4 niveaux.

50. Touche END SEARCH: Une pression sur cette touche en lecture, en pause de lecture ou à l'arrêt, fera défiler rapidement la bande en avant, l'arrêtant au début de la référence d'identification de fin. Si cet index n'existe pas, la bande s'arrêtera au début de la section "non formattée".

51. Touches de recherche (SEARCH): Presser ces touches en lecture fait défiler la bande à 4 fois la vitesse normale dans le sens correspondant aussi longtemps que vous maintenez les touches.

THIS DIGITAL APPARATUS DOES NOT EXCEED THE CLASS B LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS AS SET OUT IN THE RADIO INTERFERENCE REGULATIONS OF THE CANADIAN DEPARTMENT OF COMMUNICATIONS.

LE PRESENT APPAREIL NUMERIQUE N'EMET PAS DE BRUITS RADIOELECTRIQUES DEPASSANT LES LIMITES APPLICABLES AUX APPAREILS NUMERIQUES DE CLASSE B PRESCRITES DANS LE REGLEMENT SUR LE BROUILLAGE RADIOELECTRIQUE EDICTE PAR LE MINISTERE DES COMMUNICATIONS DU CANADA.

Caractéristiques techniques

Catégorie:	Enregistreur de bande audionumérique à têtes rotatives.
Vitesse de bande:	8,15 mm/s en mode STANDARD (vitesse de lecture de 12,225 mm/s également supportée)/4,075 mm/s en mode LONG
Durée d'enregistrement:	120 minutes en STANDARD/240 minutes en LONG (avec cassette de 120 mn)
Vitesse du tambour de têtes:	2.000 tr/mn en STANDARD/1.000 tr/mn en LONG (en enregistrement)
Enroulement rapide:	70 secondes (environ) (avec cassette R-120)
Correction d'erreur:	Correction en octet
Nombre de canaux:	2
Bits de quantification:	16 bits, linéaire en STANDARD/12 bits non-linéaire en LONG
Fréquence d'échantillonnage:	48 kHz (en lecture/enregistrement, numérique/analogique) 44,1 kHz (en lecture/enregistrement, numérique/analogique) 32 kHz (en lecture/enregistrement numérique seulement en STANDARD, numérique/analogique en LONG)
Réponse en fréquence:	10 à 22.000 Hz $\pm 0,5$ dB en STANDARD 10 à 14.500 Hz $\pm 0,5$ dB en LONG
Rapport signal/bruit:	Meilleur que 92 dB
Gamme dynamique:	Meilleure que 93 dB
Distorsion harmonique totale:	Inférieure à 0,004 % (à 1 kHz, en STANDARD) Inférieure à 0,07 % (à 1 kHz, en LONG)
Séparation des canaux:	Meilleure que 85 dB (à 1 kHz)
Pleurage et scintillement:	Non mesurable (inférieur à $\pm 0,001\%$)
Entrée — analogique	Prise RCA x 2
Niveau d'entrée nominal:	500 mV
Impédance d'entrée:	50 k ohms asymétrique
— numérique	
	Coaxial x 1 Optique x 1
Sortie — analogique	Prise RCA x 2
Niveau de sortie nominal:	500 mV
Niveau de sortie maximal:	2,0 V
Impédance de sortie:	430 ohms asymétrique
PHONES:	Prise 1/4" x 1
Niveau de sortie:	100 mW + 100 mW (8 ohms)
— numérique	
	Coaxial x 1 Optique x 1
Alimentation	
ETATS-UNIS/CANADA:	120 V CA, 60 Hz
ROYAUME-UNI/AUSTRALIE:	230 V CA, 50 Hz
EUROPE:	230 V CA, 50 Hz
Modèle d'exportation générale:	100/120/230/240 V CA, 50/60 Hz
Consommation:	28 W
Dimensions (L x H x P):	442 x 150,5 x 355 mm
Poids:	9,3 kg net

<Accessoires standard>

- Boîtier de télécommande sans fil RC-563
- Piles (SUM-3, "AA", "R6") x 2
- Cordons de raccordement entrée-sortie (type RCA) x 2
- Pour des améliorations, des caractéristiques techniques et générales peuvent être modifiées sans préavis.
- Les photos et illustrations peuvent différer légèrement du produit final.
- Les caractéristiques ont été déterminées en utilisant une fréquence d'échantillonnage de 48 kHz.

FRONTSEITE

1. Netzschalter (POWER): Zum Einschalten des Geräts betätigen. Ist bereits eine Kassette eingelegt, erscheinen die folgenden Displayfeldanzeigen:

- **Absolutzeit (ABS).**
Wenn das Band unbespielt ist und keine ABS-Codes enthält, schaltet das Zählwerk auf normalen Zählwerkbetrieb (Anzeige COUNTER).
- **Vorliegende Titel-Nr. (Programmnummer) (PNO)**
Liegt Anzeige "- -" vor, ist die Aufnahme entweder nicht durch Programmnummern gekennzeichnet oder die vorliegende Bandposition liegt zwischen zwei PNO-Marken.
- **Anzeige AUTO ID** (erscheint nicht, wenn die Kassette mit Aufnahmeschutz versehen und daher nicht bespielbar ist).
- **Die Sampling-Rate (Abtastrate) des bespielten Bandes.**
- **Bei auf die DIGITAL-Position gestelltem INPUT-Schalter** leuchtet die DIGITAL IN-Anzeige.

Bei Geräteabschaltung werden alle Speichereingaben (PGM und STOP M) gelöscht.

2. Kassettenlade: Ausschließlich für DAT-Kassetten geeignet. Herkömmliche Audiokassetten können nicht eingelegt werden.

3. Öffnen/Schließen-Taste (OPEN/CLOSE) und Anzeige für eingelegte Kassette (CASSETTE IN): Drücken, um die Kassettenlade auszufahren (die CASSETTE IN-Anzeige blinkt). Nach Einlegen einer Kassette drücken, um die Lade einzufahren (die CASSETTE IN-Anzeige leuchtet kontinuierlich). Die OPEN/CLOSE-Taste arbeitet auch bei Bandtransport. Daher drauf achten, diese Taste nicht versehentlich zu betätigen.

4. Displayfeld: Mit verschiedenen Anzeigen zu Betriebsstatus und -funktionen.

ABS: Anzeige der Absolutzeit (Laufzeit) ab Bandanfang bis zur vorliegenden Bandposition. Bei ABS-Anzeige "-----" enthält das Band keine ABS-Codes.

Bei POSITION-Anzeige wird die DAT-Feld-Position neben der Sekundenanzeige angegeben. Pro Sekunden liegen 33 Felder vor. Mit der POSITION-Funktion ist eine Versetzung in 5-Feld-Schritten möglich.

PGM: Anzeige der Absolutzeit (Laufzeit) ab Programmanfang. Der R-9 berechnet die Laufzeit

ab dem vorherigen Start-Code. Wenn das Kassettenband zwischen zwei Start-Codes erfaßt wird, erscheint die PGM-Anzeige "-----".

REMAIN: Bei Abspielen einer bespielten Kaufkassette (die TOC-Codes enthält) wird die Restzeit ab vorliegender Bandposition bis zum Bandende angezeigt. Falls das Band keine TOC-Codes enthält, berechnet der R-10 die Restzeit entsprechend den Bandlängenkennzeichnungen, die sich am DAT-Kassettengehäuse befinden.

PNO: Bei Programmierung und Überprüfung werden die Titel in programmierter Reihenfolge angezeigt.

STEP: Die Zahl neben der Pfeilanzeige gibt im Skip-Betrieb an, wie oft die Skip-Taste angetippt wurde. Bei direktem Suchlauf wird die anzuwählende Programmnummer angezeigt.

HINWEIS: Für die Aufnahme und Wiedergabe in LONG PLAY-Geschwindigkeit muß die angezeigte Zeit (Stunden, Minuten, Sekunden) verdoppelt werden, um die korrekte Lauf- bzw. Restzeit zu erhalten.

5. Spitzenpegelanzeigen (L und R): Eingangspegelanzeige bei Aufnahmebereitschaft, Eingangssignalüberwachung (siehe 17.) und Aufnahme. Ausgangspegelanzeige bei Wiedergabe.

6. Pegelreserveanzeige (MARGIN): Numerische Anzeige mit Peak Hold-Funktion, die die "Pegelreserve" bis zum Digital-Sättigungspegel (bei dessen Überschreiten Verzerrungen auftreten) angibt. Die Anzeige für den höchsten Pegel erfolgt in Bezugnahme auf die zuletzt vorgenommene MARGIN RESET-Einstellung (bzw. ab Einlegen einer neuen Kassette). Der Anzeigebereich liegt zwischen -39 dB und 0 dB. Bei blinkender Anzeige "0 dB" liegt eine Sättigungspegelüberschreitung vor. Bei Wiedergabe arbeitet die OVER-Anzeige nicht.

7. Kopfhörerpegelregler (PHONES LEVEL): Lautstärkeregler für die darunterliegende Kopfhörerbuchse.

8. Kopfhörerbuchse (PHONES): Ausschließlich einen Stereo-Kopfhörer anschließen! Keinen zweipoligen Monostecker verwenden! Der eingebaute Kopfhörerverstärker arbeitet mit einer Nennleistung von 100 mW an 8 Ohm Last.

9. Skipfunktionstasten (Skip) : Arbeitet bei Wiedergabe, Pause und Stop. Die linke Taste einmal drücken, um das Band bis zum Titelanfang zurückzuspulen. Mehrmals drücken, um mehrere Titel zu überspringen.

Die rechte Taste einmal drücken, um das Band bis zum nächsten Titelanfang vorzuspulen.

- 10. Bereitschaftstaste (STANDBY):** Bei leuchten-der Anzeige schaltet der R-9 nach den folgenden Suchlauffunktionen automatisch auf Pause, nicht auf Wiedergabe: Programmierter Wiedergabe, Skip-Suchlauf und Direkt-Suchlauf. Die Wiedergabe kann mit der PLAY-Taste an der Frontseite oder Fernbedienung ausgelöst werden.

HINWEIS: Nach ca. 8 Minuten schaltet der R-9 die Pauseschaltung automatisch ab.

- 11. Stummaufnahmetaste (REC MUTE):** Diese Taste bei Aufnahme oder Aufnahmebereitschaft (Aufnahmepause) betätigen, um das Band mit einem unbespielten Abschnitt von 4 Sekunden Länge zu versehen. Hierbei blinkt die über der RECORD-Taste befindliche LED-Anzeige. Hierauf schaltet das Gerät auf Aufnahmebereitschaft (zurück).

- 12. Rückspultaste (REW):**
Drücken, um das Band schnell zurückzuspulen.

- 13. Vorpultaste (F.FWD):** Arbeitet wie die Rückspultaste.
Drücken, um das Band schnell vorzuspulen.

- 14. Stoptaste (STOP):** Für Abschaltung des Bandtransports und jeder vorliegenden Funktion. Die STOP-Taste zweimal betätigen, um die Programmierungsspeicherungen zu löschen. Mit der STOP-Taste wird die DAT-Kopftrommel abgeschaltet.

- 15. Wiedergabetaste (PLAY):**

- a) Bei Stop betätigen, um die Wiedergabe zu starten.
- b) Bei Aufnahmebereitschaft (Aufnahmepause) betätigen, um die Aufnahme zu starten.
- c) Bei Pause betätigen, um den Bandlauf fortzusetzen.
- d) Bei offener Kassetteneinlage betätigen, um die Lade einzufahren und die Wiedergabe zu starten.

- 16. Pausetaste (PAUSE):**

- a) Betätigen, um Wiedergabe oder Aufnahme kurzzeitig zu unterbrechen. Mit der PLAY-Taste wird die Aufnahme oder Wiedergabe fortgesetzt.
- b) Bei Stopbetrieb betätigen, um auf Wiedergabebereitschaft zu schalten. Mit der PLAY-Taste wird die Wiedergabe gestartet.

HINWEIS: Wird die Aufnahme mit der PAUSE-Taste für über 8 Minuten unterbrochen, schaltet das Gerät automatisch auf Eingangssignalüberwachung. In diesem Fall zur Aufnahme-fortsetzung die STOP-Taste (Überwachungsabschaltung) und dann die RECORD- und PLAY-Taste drücken.

Wird die Wiedergabe mit der PAUSE-Taste für über 8 Minuten unterbrochen, schaltet das Gerät automatisch auf Stop.

- 17. Aufnahmetaste (RECORD):**

- a) Zusammen mit der PLAY-Taste betätigen, um die Aufnahme zu starten.
- b) Bei gedrückt gehaltener RECORD-Taste die PAUSE-Taste betätigen, um auf Aufnahmebereitschaft zu schalten.
- c) Bei Stopbetrieb betätigen, um auf Eingangssignalüberwachung (oder Sampling-anzeige) zu schalten.

Unterschied zwischen Aufnahmebereitschaft und Eingangssignalüberwachung:

Aufnahmebereitschaft: Bei gedrückt gehaltener RECORD-Taste die PAUSE-Taste betätigen oder bei Aufnahmebetrieb die PAUSE-Taste betätigen. Die Kopftrommel ist eingeschaltet. Diese Betriebsart wird automatisch nach ca. 8 Minuten abgeschaltet.

Eingangssignalüberwachung: Bei Stopbetrieb die RECORD-Taste drücken (bei Aufnahmepause erfolgt automatische Umschaltung nach 2 Minuten). Hierbei ist die Kopftrommel abgeschaltet. Zur Abschaltung dieser Betriebsart die STOP-Taste drücken.

Die Eingangssignalüberwachung steht auch bei nicht eingelegter Kassette bzw. bei für Aufnahme gesperrter Kassette zur Verfügung.

Je nach Eingangssignal (analog oder digital) erscheint die Anzeige "d-A" bzw. "A-d-A".

Bei beiden Betriebsarten (Aufnahmebereitschaft oder Eingangssignalüberwachung) kann der Aufnahmepegel eingestellt werden. Die Digitalausgänge des R-9 liefern bei beiden Betriebsarten Signale, die nicht von der REC LEVEL-Pegelregelung beeinflusst werden können.

HINWEIS: Bei Verwendung der Fernbedienung kann nicht mit der RECORD-Taste von STOP auf Eingangssignalüberwachung geschaltet werden. Hierzu muß die RECORD-Taste gedrückt gehalten und die STOP-Taste betätigt werden oder umgekehrt die STOP-Taste gedrückt halten und die RECORD-Taste betätigen.

- 18. Daten-Einstellscheibe/Bandsuchlaufring (DATA/SHUTTLE):** Die DATA-Scheibe dient der Dateneingabe (anzuwählende Programmnummer, ABS-Zeitverlängerung/-verkürzung zur Korrektur einer Start-/Skip-Code-Index-Position). Der SHUTTLE-Ring ermöglicht schnellen Suchlauf vorwärts/rückwärts. Die Suchlaufgeschwindigkeit (maximal 16-fache Normalgeschwindigkeit) entspricht dem Drehwinkel des Reglers.

19. Zählwerkbetriebsarttaste (COUNTER MODE):

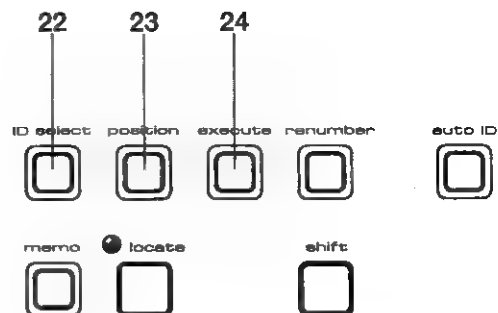
Hiermit wird das Zählwerk wie folgt in Reihe umgeschaltet:

1. Absolutzeit: Laufzeit ab Bandanfang, angezeigt in Stunden, Minuten und Sekunden (leuchtende ABS-Anzeige).
2. Programmzeit (Titelzeit): Laufzeitanzeige ab Titelanfang in Stunden, Minuten und Sekunden (leuchtende PGM-Anzeige).
3. Restzeit: Gesamtrestzeitanzeige bis Bandende in Stunden, und Minuten (leuchtende REMAIN-Anzeige).
 - Je nach Kassetten-Hersteller kann die tatsächliche Restzeit von der Restzeitanzeige leicht abweichen.
 - Enthält das Band TOC-Codes (Table of Contents), erfolgt die Restzeitanzeige sekundengenaue.
4. Zählwerk: Angabe der Bandposition in Bezug zu einer Nullposition (leuchtende COUNTER-Anzeige).

20. Zählwerkrückstelltaste (RESET): Für die Nullrückstellung (0000) des Bandzählwerks. Arbeitet nur bei zugeschalteter Zählwerkfunktion (leuchtende COUNTER-Anzeige im Displayfeld).

21. Pegelreserve-Rückstelltaste (MARGIN RESET): Löscht eine bereits vorhandene Pegelreserveanzeige (Pegelreserve = Aussteuerungsspielraum bis zum Sättigungspegel), um eine neue Anzeige zu ermöglichen (Siehe vorhergehenden Punkt 6).

22. ID-Code-Wahlschalter (ID SELECT): Mit dieser Taste können bei Bandtransport oder Bandstillstand die folgenden Indexcodefunktionen hintereinander abgerufen werden. Die verfügbaren Codes hängen von der vorliegenden Bandtransportfunktion ab, wie in der folgenden Übersicht gezeigt.



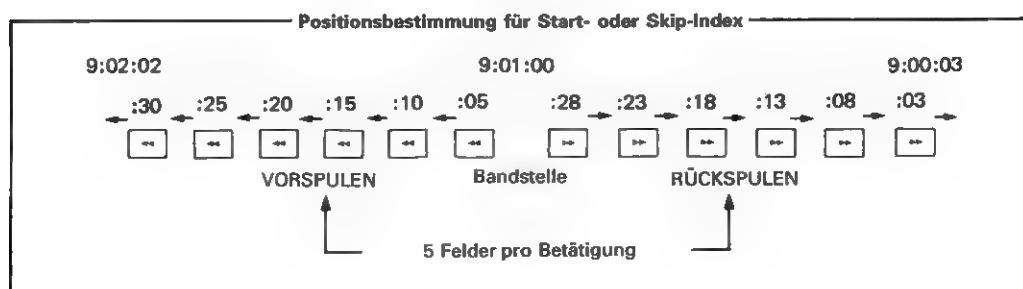
Bandlaufbetriebsart	Index-Typ
Aufnahme	START-INDEX SETZEN
	SKIP-INDEX SETZEN
	END-INDEX SETZEN
Wiedergabe/Stop	START-INDEX SETZEN*
	SKIP-INDEX SETZEN*
	START-INDEX LÖSCHEN
	SKIP-INDEX LÖSCHEN

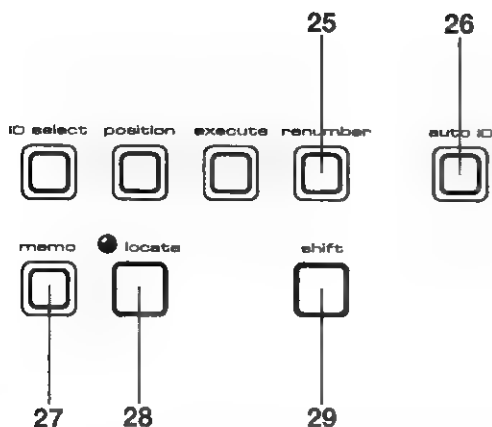
*Keine Funktionsausführung bei Stopbetrieb.

Bei Anzeige der vorgesehenen Index-Funktion erfolgt die Funktionsausführung bei Betätigen der EXECUTE-Taste 24.

23. Positionstaste (POSITION): Hiermit kann jede für eine START- oder SKIP-Index-Marke vorgesehene Bandstelle in 5-Feld-Schritten vor dem eigentlichen Setzen der Marke festgelegt werden. Hier wird sozusagen eine "vorläufige" Markierungsposition für Start/Skip-Codes gesetzt, die mit der F.FWD- oder RWD-Taste bzw. der DATA-Scheibe (im Bereich von ± 50 Feldern) versetzt werden kann. So können Sie die bestgeeignete Markierungsposition präzise bestimmen.

24. Setzen/Löschen-Taste (EXECUTE): Führt die mit der ID SELECT-Taste 22 bestimmte Index-Funktion durch.





25. Neunumerierungsschalter (RENUMBER): Zur Auslösung der Neunumerierung betätigen, um jedem Start-ID-Code einen durchgehenden Programmnummerncode (PNO) zuzuordnen.

26. Automatik-Index-Taste (AUTO ID): Bei leuchtender Anzeige AUTO ID werden Start-ID-Codes und Programmnummerncodes bei Aufnahme automatisch im Band-Subcodebereich mit aufgezeichnet. Diese Aufzeichnung erfolgt bei jedem neuen Aufnahmeabschnitt (erstes Signal nach einem signalfreien Abschnitt). Diese AUTO-ID-Funktion arbeitet für Digital- und Analog-Eingangssignale.

Bei Geräteeinschaltung muß die AUTO ID-Anzeige leuchten (dies gilt nicht, wenn die Kassette mit Aufnahmeschutz versehen ist).

Diese Funktion kann mit der AUTO ID-Taste abgeschaltet werden (die AUTO ID-Anzeige erlischt), so daß Start-ID- und Programmnummerncodes nicht aufgezeichnet werden.

27. Speichertaste (MEMO): Die vorliegende ABS-Zeit wird als Band-MEMO-Marke abgespeichert.

28. Memo-Suchlauftaste (LOCATE): Das Band wird automatisch bis zur abgespeicherten MEMO-Marke umgespult.

29. Umschalttaste (SHIFT): Ändert die Funktion einer gleichzeitig gedrückten anderen Taste.

SHIFT + MEMO: Die zu diesem Zeitpunkt gespeicherte MEMO-Zeit wird angezeigt.

SHIFT + AUTO ID: Der Ansprechpegel des AUTO ID-Schaltkreises kann variiert werden.

30. Eingangspegelregler (REC LEVEL, L und R): Nur für den Aufnahmepegel des Analog-Eingangssignals. Diese Regler arbeiten nicht für das Digital-Eingangssignal!

31. Eingangswahlschalter (INPUT): Für die Vorwahl der Signalquelle (analog oder digital). Bei Eingangsvorwahl DIGITAL leuchtet die DIGITAL IN-Anzeige im Displayfeld. Die an den Analogbuchsen anliegenden Signale werden nicht bearbeitet.

32. Aufnahmegeschwindigkeitsschalter (REC MODE): In Stellung LONG wird die jeweilige Aufnahmezeit der Kassette verdoppelt (von 60 auf 120 Minuten, von 90 auf 180 Minuten etc.). In Stellung STANDARD entspricht die Aufnahmezeit der auf der Kassette angegebenen Zeit.

Die verdoppelte Aufnahmezeit (LONG) steht nur für analoge bzw. digitale Signalquellen mit 32-kHz-Sampling zur Verfügung.

33. Aufnahmepegel-Wahlschalter (REC LEVEL): In Stellung REFERENCE ist R-9 für einen Nenn-Eingangspegel von 500 mV ausgelegt. Die REFERENCE-Schalterstellung ist im Normalfall zur einwandfreien Aufnahme geeignet, da die meisten Analog-Geräte für diesen Ausgangspegel ausgelegt sind. Falls die Signalquelle einen hiervon abweichenden Nennpegel vorweist, den Schalter in Stellung MANUAL bringen und den Pegel mit den REC LEVEL-Reglern L und R aussteuern.

HINWEIS: Bei auf REFERENCE gestelltem Schalter sicherstellen, daß Pegelspitzen nicht übersteuert werden (Anzeigebereich OVER der Spitzenpegelanzeige).

34. Sampling-Frequenz-Wahlschalter (SAMPLING FREQUENCY): Nur bei der Aufnahme einer analogen Signalquelle einsetzbar. Als Sampling-Frequenz sind 44,1 kHz und 48 kHz verfügbar. Die der CD-Sampling-Frequenz entsprechende Frequenz von 44,1 kHz muß verwendet werden, wenn die Aufnahme später als Digital Master-Aufnahme für eine CD-Produktion verwendet werden soll. 48 kHz ist die in anderen professionellen Anwendungen übliche Sampling-Frequenz.

Dieser Schalter ist bei der Aufnahme digitaler Signalquellen und bei Wiedergabe ohne Funktion. In diesen Fällen schaltet der R-9 automatisch auf die erforderliche Sampling-Frequenz der Signalquelle (der Kassette). Die Sampling-Frequenz (48,0, 44,1 bzw. 32,0 kHz) wird jeweils unterhalb der DIGITAL IN-Anzeige angegeben.

35. Fernbediensignal-Empfangsfenster: Für Empfang der von der mitgelieferten Fernbedienungseinheit RC-563 ausgestrahlten Infrarotsignale.

RÜCKPLATTE

36. Lichtleiter-Eingang/Ausgang für Digitalsignale (DIGITAL IN/OUT OPTICAL):

OPTICAL IN: Für Anschluß eines Lichtleiterkabels, um eine Digitalsignalquelle direkt anzuschließen.

OPTICAL OUT: Für Anschluß eines Lichtleiterkabels, um das Digital-Ausgangssignal des R-9 direkt an eine geeignete Komponente abzugeben.

37. Eingangswähler: Bei Lichtleiteranschlußverbindung mit einer Digital-Signalquelle in Position OPTICAL bringen. Bei Anschlußverbindung mit Koaxialkabeln in Position COAXIAL bringen.

38. Koaxial-Eingang/Ausgang für Digitalsignale (DIGITAL IN/OUT COAXIAL):

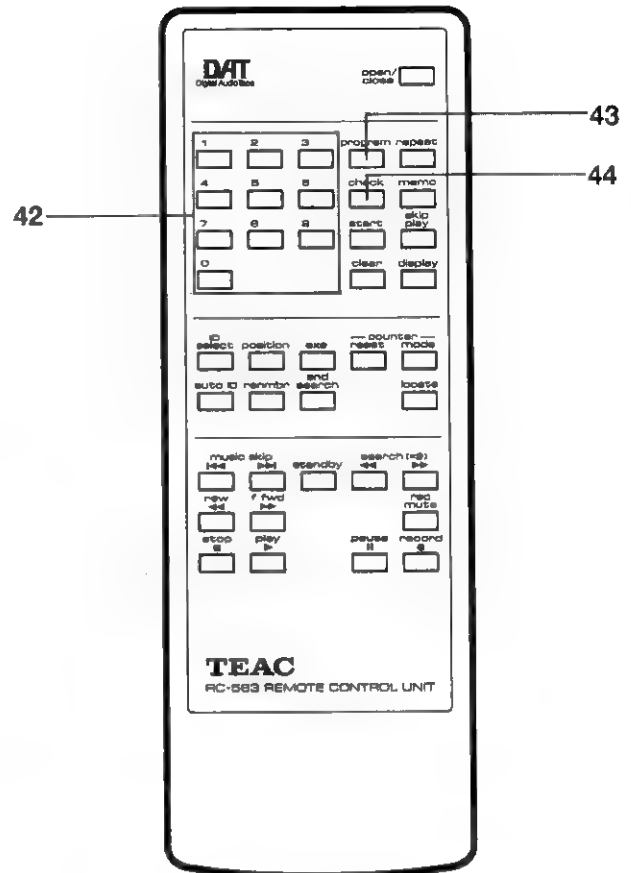
Diese Cinch-Buchsen (INPUT und OUTPUT) dienen dem Anschluß per 75-Ohm-Koaxialkabel an den Digital-I/O-Port (SPDIF, IED 958 Typ II) eines Digital-Audiogeräts.

39. Line-Eingang (LINE IN): Diese Cinch-Buchsen sind für den Anschluß von unsymmetrischen Analogsignalquellen am R-9 ausgelegt. Der Nennpegel liegt bei 500mV .

40. Line-Ausgang mit festem oder variablem Pegel (LINE OUT): Diese Cinch-Buchsen dienen dem Anschluß an den Eingang für unsymmetrische Analogsignale einer externen Komponente. Der Nenn-Ausgangspegel liegt bei 500mV .

41. Spannungswähler (nur Generalexportmodell) Falls eine Spannungsumstellung auf die vorliegende Netzspannung erforderlich ist, wie folgt vorgehen:

1. DAS NETZKABEL ABZIEHEN!
2. Mit einem Schraubendreher drehen, bis die erforderliche Voltzahlanzeige erscheint.



RC-563 FERNBEDIENUNGSEINHEIT

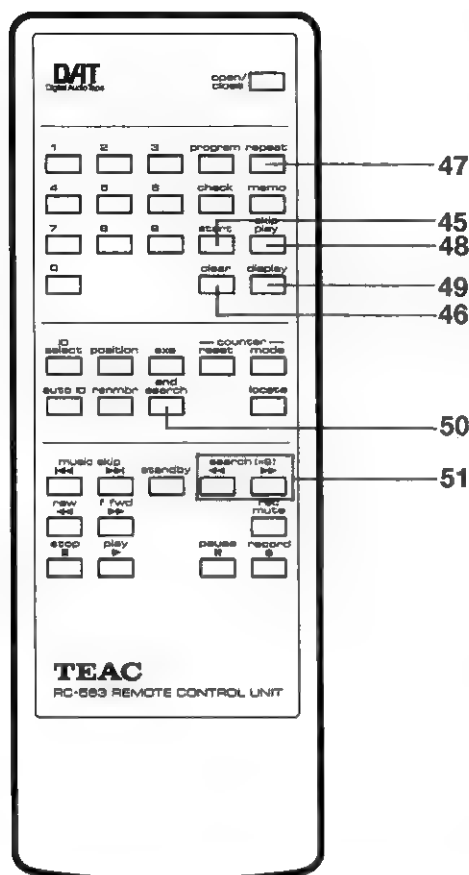
Diese Angaben beschränken sich auf Funktionen, für die an der R-9-Frontplatte keine Funktionstasten vorhanden sind.

42. Numerische Tasten: Für Titel-Direktanwahl oder Titelprogrammierung.

43. Eingabetaste (PROGRAM): Für die Speicherung des mit den numerischen Tasten angewählten Titels.

44. Überprüfungstaste (CHECK): Dient bei der Titelprogrammierung der Überprüfung der Titeleingabe. Jedes Betätigen der CHECK-Taste ruft die jeweils nächste gespeicherte Titelnummer zusammen mit der STEP-Nummer (Programmpositionsnummer) auf. (Beispiel: Anzeige STEP 09 4. Der 4. Bandtitel wird als 9. Titel dieser Programmierung abgespielt.)

HINWEIS: Nach Start der programmierten Wiedergabe ist die CHECK-Taste ohne Funktion.



47. Wiederholungstaste (REPEAT): Einmal betätigen, um den vorliegenden Titel wiederholt abzuspielen. Zweimal betätigen, um den gesamten Bandinhalt wiederholt abzuspielen. Bei programmierter Wiedergabe einmal betätigen, um alle programmierten Titel wiederholt wiederzugeben.

Die REPEAT-Taste kann vor oder bei der Wiedergabe betätigt werden.

48. Skip-Suchlauf-Taste (SKIP PLAY): Bei zugeschalteter Skipfunktion wird die Wiedergabe bei Abtastung eines Skip-Codes unterbrochen und das Band wird bis zum nächsten Start-ID-Code vorgespult (Anzeige SKIP PLAY leuchtet). Die Taste nochmals betätigen, um diese Funktion abzuschalten.

49. Anzeigeschalter (DISPLAY): Variiert die Anzeigehelligkeit in vier Stufen.

50. End-Code-Suchlauffaste (END SEARCH): Bei Wiedergabe, Wiedergabepause oder Stop drücken, um das Band bis zum End-Code vorzuspulen. Wenn dieser Code auf dem Band fehlt, wird das Band automatisch am Anfang des nächsten informatierten Bandabschnittes gestoppt.

51. Suchlauffasten (SEARCH): Bei Wiedergabe gedrückt halten, um das Band in neunfacher Normalgeschwindigkeit zu transportieren. Der Suchlauf wird in der entsprechenden Bandlaufrichtung bis zur Tastenfreigabe beibehalten.

45. Starttaste (START):

- 1) Start der programmierten Wiedergabe: Nach Speicherung der vorgesehenen Titel startet diese Taste die Wiedergabe entsprechend der von Ihnen bestimmten Titelfolge.
- 2) Start des Direkt-Suchlaufs: Nach Eingabe des vorgesehenen Titels (mit der 10er-Tastatur) startet diese Taste den Suchlauf (blinkende SEARCH-Taste). Bei Erreichen dieses Titels schaltet das Gerät automatisch auf Wiedergabe (bzw. Bereitschaft, falls die STANDBY-Anzeige leuchtet).

46. Löschtaste (CLEAR): Betätigen, um die zuletzt vorgenommene Titelspeicherung zu löschen. (Um alle Titelspeicherungen und die Programmierbetriebsart zu löschen, die STOP-Taste betätigen.)

Mit der CLEAR-Taste kann auch die Zahlenanzeige, die entsprechend der 10er-Tastatur-Eingabe erscheint, gelöscht werden.

Bescheinigung des Herstellers/Importeurs

Hiermit wird bescheinigt, daß der/die/das

TEAC R-9 DAT-RECORDER

(Gerät, Typ, Bezeichnung)

in Übereinstimmung mit den Bestimmungen der

AMTSBLATT 163/1984, VFG 1045/1984, VFG 1046/1984

(Amtsblattverfügung)

funk-entstört ist.

Der Deutschen Bundespost wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

TEAC CORPORATION

Name des Herstellers/Importeurs

Typ:	Digital Audio Tape-Rekorder mit Kopftrommel 8,15 mm/Sek. bei STANDARD-Geschw. (auch für 12,225 mm/Sek. Wiedergabegeschwindigkeit geeignet)/4,075 mm/Sek. bei LONG-Geschw.
Aufnahmezeit:	120 Minuten (STANDARD)/240 Minuten (LONG) (mit R-120-Kassette)
Kopftrommelumdrehungsgeschwindigkeit:	2000 U/Min. (STANDARD)/1000 U/Min. (LONG) (Aufnahme)
Umspulzeit:	Ca. 70 Sek. (mit R-120-Kassette)
Fehlerkorrektur:	Achtfach
Anzahl der Kanäle:	2
Quantisierung:	16 Bit linear (STANDARD)/12 Bit nicht linear (LONG)
Samplingrate:	48 kHz (bei Wiedergabe/Aufnahme) (digital/analog) 44,1 kHz (bei Wiedergabe/Aufnahme) (digital/analog) 32 kHz (bei Wiedergabe und Aufnahme nur digital für STANDARD, digital, analog für LONG)
Frequenzgang (Aufnahme):	10 — 22.000 Hz $\pm 0,5$ dB (STANDARD) 10 — 14.500 Hz $\pm 0,5$ dB (LONG)
Signal/Rausch-Abstand:	Größer 92 dB
Dynamikumfang:	Größer 93 dB
Klirrfaktor:	Kleiner 0,004 % (bei 1 kHz) (STANDARD) Kleiner 0,07 % (bei 1 kHz) (LONG)
Kanaltrennung:	Größer 85 dB (bei 1 kHz)
Gleichlaufschwankungen:	Nicht meßbar (kleiner $\pm 0,001$ %)
Analog — Eingang (Cinch x 2)	
Nenueingangsspegel:	500 mV
Eingangsimpedanz:	50 kOhm, unsymmetrisch
Digital — Eingang:	Koaxial x 1 Optisch x 1
Analog — Ausgang (Cinch x 2)	
Nennausgangsspegel:	500 mV
Maximaler Ausgangsspegel:	2,0 V
Ausgangsimpedanz:	430 Ohm, unsymmetrisch
PHONES:	1/4" x 1
Ausgangsspegel:	100 mW + 100 mW (8 Ohm Last)
Digital — Ausgang:	Koaxial x 1 Optisch x 1
Spannungsversorgung	
USA/KANADA:	120 V Wechselspannung, 60 Hz
GROSSBRITANNIEN/AUSTRALIEN:	230 V Wechselspannung, 50 Hz
EUROPA:	230 V Wechselspannung, 50 Hz
Generalexportmodell:	100/120/230/240 V Wechselspannung, 50/60 Hz
Leistungsaufnahme:	28 W
Abmessungen (BxHxT):	442 x 150,5 x 355 mm
Gewicht:	Ca. 9,3 kg

<Mitgeliefertes Zubehör>

- Drahtlose Fernbedienung RC-563
- Batterie (SUM-3, "AA", "R6") x 2
- Anschlußkabel (Cinch -- Cinch) x 2

- Technische Änderungen vorbehalten.
- Fotografien und Abbildungen können leicht vom ausgelieferten Modell abweichen.
- Die technischen Daten beziehen sich auf eine Samplingrate von 48 kHz.

PANNELLO FRONTALE

1. **Commutatore POWER (interruttore generale):**

controlla l'alimentazione dell'R-9. Quando POWER è in posizione ON, ■ c'è un nastro caricato nell'apparecchio, sul display del contatore appariranno le seguenti indicazioni:

- **Tempo Assoluto ("ABS")**
Se il nastro è vuoto e non contiene informazioni ABS, il contatore commuterà al modo Tape Counter (contanastro), indicato dalla scritta "COUNTER".
- **Numero del programma in corso ("PNO")**
Se, al posto di un qualsiasi numero, appare "--,---", vuol dire che il programma non è stato numerato, oppure che il nastro si trova in un punto intermedio tra due contrassegni PNO.
- **"AUTO ID"**
(a meno che sia stato attivato l'interruttore che protegge la cassetta contro la scrittura).
- **Cadenza di campionamento del nastro preregistrato.**
- **"DIGITAL IN",** se l'interruttore INPUT si trova in posizione DIGITAL.

Portando POWER in posizione OFF, verranno cancellate tutte le memorie (PGM e punto di autopoizionamento).

2. **Vano cassetta:** permette di caricare esclusivamente cassette DAT; le normali cassette audio non sono accettate.
3. **Tasto OPEN/CLOSE e indicatore CASSETTE IN:**
premendo una volta il tasto, il vano cassette scivola verso l'esterno e l'indicatore CASSETTE IN comincia a lampeggiare. Dopo aver caricato una cassetta, premendo una seconda volta il tasto il vano rientra e l'indicatore rimane stabilmente acceso. Il tasto OPEN/CLOSE apre il vano cassette anche se il nastro è in corso di riproduzione: attenzione quindi a non premerlo accidentalmente.
4. **Finestra del display:** fornisce una varietà di informazioni ■ messaggi, che mantengono l'utilizzatore sempre al corrente degli azionamenti in corso.

ABS: Indica il tempo trascorso dall'inizio del nastro fino alla posizione attuale. Se, nel modo ABS, viene visualizzato "--,---", vuol dire che sul nastro non sono stati registrati dati ABS.

Nel modo POSITION, la posizione del quadro DAT è visualizzata con numeri più piccoli, vicino alla cifra dei secondi. POSITION permette di regolare questo punto, secondo incrementi di 5 quadri.

PGM: Indica il tempo trascorso dall'inizio del programma in corso di riproduzione. L'R-9 calcolerà il tempo trascorso a partire dal precedente codice ID d'inizio. PGM indicherà "--,---" se il nastro è stato inserito in un punto intermedio tra codici ID Start.

REMAIN: Quando è in corso di riproduzione un nastro musicale preregistrato (codificato con "TOC"), viene qui indicato il tempo restante dall'attuale posizione alla fine del nastro. In assenza di TOC, verrà calcolato un tempo restante approssimativo, compreso tra il tempo ABS e i dati ricavati dai sensori di lunghezza del nastro previsti sull'involucro della cassetta DAT.

PNO: Nei modi PROGRAM ■ CHECK, il display PNO mostra l'ordine di un programma nella sequenza.

STEP: Questo numero, visualizzato a destra della freccia, indica quante volte è stato premuto il tasto Skip durante SKIP SEARCH. Nel modo DIRECT SEARCH, indica invece il particolare PNO che si sta ricercando.

NOTA: Quando si registra nel modo LONG REC, oppure quando si riproduce un nastro registrato nel modo LONG REC, per trovare l'effettivo tempo trascorso o restante bisogna moltiplicare per due i valori indicati per ore, minuti e secondi.

5. **VU-Meter di picco, sinistro e destro:** questi strumenti registrano i livelli d'ingresso nei modi Record Ready, Input Monitor (17) o Record, e i livelli d'uscita durante la riproduzione.
6. **MARGIN:** Si tratta di un VU-Meter digitale con memorizzazione del picco, che mostra lo spazio disponibile prima che venga raggiunta la saturazione digitale e si manifesti distorsione. Memorizza la lettura massima da quando è stato premuto l'ultima volta MARGIN RESET (o da quando è stato inserito un nuovo nastro). L'indicazione varia tra -39 ■ 0 dB. Nel corso della registrazione, se lampeggia "0 dB", vuol dire che lo strumento ha raggiunto il punto di sovraccarico (OVER) ■ si è manifestata distorsione. L'indicazione OVER non può apparire quando l'apparecchio è in riproduzione.
7. **Controllo PHONES LEVEL:** Regola il volume di ascolto della cuffia inserita nella presa immediatamente sottostante.
8. **Presa PHONES:** Collegare qui soltanto una cuffia stereo. Non inserire in questa presa cuffie mono a 2 conduttori. L'amplificatore per cuffia incorporato è dimensionato per erogare 100 mW su un carico di 8 Ω.
9. **Tasti SKIP:** Sono attivi solo nei modi PLAY, PAUSE e STOP. Premendolo una sola volta, il tasto ■ sinistra riavvolge il nastro fino all'inizio del programma in corso. Premendolo ripetutamente, si possono saltare parecchi programmi.

Analogamente, ogni volta che si preme il tasto SKIP a destra, il nastro verrà posizionato all'inizio del programma successivo.

- Durante una riproduzione PROGRAM, la funzione è limitata ai programmi in memoria.

10. Tasto STANDBY: Quando questo indicatore è acceso, l'R-9 entrerà automaticamente nel modo PAUSE, invece di iniziare la riproduzione dopo ognuna di queste operazioni di ricerca: PROGRAM PLAY, SKIP, o DIRECT SEARCH. La riproduzione ripartirà solo premendo PLAY sul pannello frontale o sul telecomando.

NOTA: L'R-9 uscirà automaticamente dal modo PAUSE dopo circa 8 minuti.

11. Tasto REC MUTE: Premendo questo tasto nei modi RECORD o RECORD PAUSE, si mette a lampeggiare il LED indicatore sovrastante il tasto RECORD e il nastro gira per 4 secondi, senza che venga registrato nessun segnale. L'apparecchio si porta poi automaticamente nel modo "pronto alla registrazione".

12. Tasto REW: Riavvolge il nastro ad alta velocità, in senso inverso.

13. Tasto F.FWD: analogo a REW: fa avanzare il nastro ad alta velocità.

14. Tasto STOP: Ferma qualsiasi movimento del nastro e disattiva qualsiasi funzione in corso di svolgimento. Premendolo 2 volte, STOP cancella le memorie PROGRAM. Con questo tasto si può anche fermare il tamburo della testina DAT, per interrompere la sua rotazione rispetto al nastro.

15. Tasto PLAY:

- a) Se viene premuto nel modo STOP, fa partire la riproduzione del nastro.
- b) Se viene premuto nel modo RECORD PAUSE, fa partire la registrazione.
- c) Se viene premuto dopo PAUSE, fa ripartire la riproduzione dal punto in cui si era interrotta.
- d) Se viene premuto quando il vano cassette è aperto, lo fa chiudere e inizia poi la riproduzione.

16. Tasto PAUSE:

- a) Premendo questo tasto nei modi RECORD o PLAY, il nastro si ferma temporaneamente. La registrazione o la riproduzione riprenderanno quando verrà premuto il tasto PLAY.
- b) Premendo PAUSE nel modo STOP, l'apparecchio si porta nel modo Play Ready e attende che venga premuto PLAY per far iniziare la riproduzione.

NOTA: Se si interrompe la registrazione premendo PAUSE e si lascia l'apparecchio in quella condizione, dopo 8 minuti si imposterà automaticamente il modo "Input Monitor". Per riprendere la registrazione da questo modo, bisogna prima disattivarlo premendo STOP e poi premere nuovamente RECORD e PLAY. Se si interrompe la riproduzione premendo PAUSE e si lascia l'apparecchio in quella condizione, dopo 8 minuti si attiverà il modo STOP.

17. Tasto RECORD:

- a) Premendo questo tasto insieme a PLAY, ha inizio la registrazione (LED RECORD acceso).
- b) Premendo PAUSE insieme a RECORD, l'apparecchio si porta nel modo "Record Ready".
- c) Premendo RECORD da solo, nel modo STOP, si attiva il modo "Input Monitor" oppure "Sampling Monitor".

Differenza tra i modi "Record Ready" e "Input Monitor":

Il modo **RECORD READY** è accessibile mantenendo premuto RECORD e premendo PAUSE, ossia premendo PAUSE dopo aver premuto RECORD. In questo modo funzionale, il tamburo delle testine è in movimento. Dopo 8 minuti, il modo si esclude automaticamente.

Il modo **INPUT MONITOR** si imposta premendo RECORD in condizione Stop (oppure lasciando l'apparecchio in REC PAUSE per 8 minuti). Il tamburo non si muove. Per uscire dal modo Input Monitor, premere STOP.

Il modo Input Monitor può essere impostato anche quando non c'è una cassetta inserita o quando c'è una cassetta protetta contro la scrittura.

A seconda che il segnale d'ingresso sia digitale o analogico, sul display appariranno rispettivamente le scritte "d-A" oppure "A-d-A".

In entrambi i modi (Record Ready o Input Monitor) si possono predisporre i corretti livelli di registrazione. Le uscite digitali dell'R-9 possono trasmettere dati in entrambi i modi, ma non sono influenzate dai controlli REC LEVEL.

NOTA: Premendo il tasto RECORD sul telecomando da solo, in condizione STOP, non si ottiene nessun effetto. Per attivare a distanza il modo Input Monitor, bisogna mantenere premuto RECORD sul telecomando e premere STOP oppure, viceversa, mantenere premuto STOP e premere RECORD.

18. Manopola DATA/SHUTTLE: La manopola DATA interna serve ad impostare il numero di un programma per la ricerca veloce, oppure per incrementare/decrementare il display del tempo ABS, per centrare nel modo migliore possibile la posizione di un codice ID di inizio o salto. La manopola SHUTTLE esterna permette la ricerca veloce con segnali cue; ruotando la manopola verso destra, il nastro avanza; ruotando invece la manopola verso sinistra, il nastro indietreggia, con velocità variabile in continuità determinata dall'angolo di cui è stata ruotata la manopola (fino a 16 volte la normale velocità di riproduzione).

19. Commutatore COUNTER MODE: Ogni volta che si preme il tasto di questo commutatore, sul display scorrono in sequenza le seguenti informazioni:

1. Tempo assoluto: tempo trascorso dall'inizio del nastro, indicato in ore, minuti e secondi. Sul display si legge "ABS".
2. Tempo del programma: tempo trascorso dall'inizio di ogni programma, indicato in ore, minuti e secondi. Sul display si legge "PGM".
3. Tempo restante: tempo totale che rimane sul nastro, indicato in ore e minuti. Sul display si legge "REMAIN".
 - A causa delle differenze tra nastri di varie marche, il tempo REMAIN effettivamente disponibile può risultare diverso da quello indicato sul display.
 - Se il nastro contiene una TOC (Table Of Contents), il tempo restante è indicato con precisione al secondo.
4. Numero del contatore: indica la lunghezza di nastro che si è spostata rispetto ad un punto di riferimento zero. Sul display si legge "COUNTER."

20. Tasto RESET: porta a 0000 il contanastro. Questo tasto agisce solo quando è attivo il modo Tape Counter, condizione indicata dalla comparsa della scritta "COUNTER" nella finestra del display.

21. Tasto MARGIN RESET: annulla un'indicazione MARGIN (spazio di variabilità disponibile), in modo che si possano effettuare nuove letture (vedi punto 6).

22. Commutatore ID SELECT: Ogni volta che si preme questo tasto (con il nastro sia in movimento che fermo) vengono selezionati in sequenza i seguenti codici ID ("Indice"), come indicato dai display. I codici che si possono impostare differiscono a seconda del modo operativo in funzione, come indicato nella tabella.

Modo operativo	Codice ID
Registrazione	START ID WRITE SKIP ID WRITE END ID WRITE
Riproduzione/Stop	START ID WRITE* SKIP ID WRITE* START OD ERASE SKIP ID ERASE

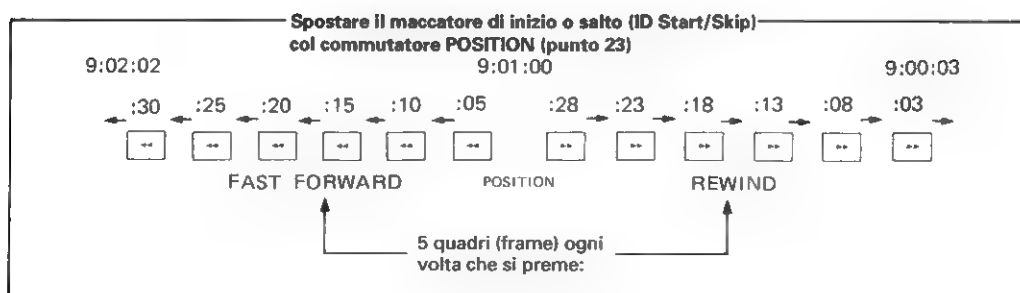
* non possono essere eseguiti in condizione STOP

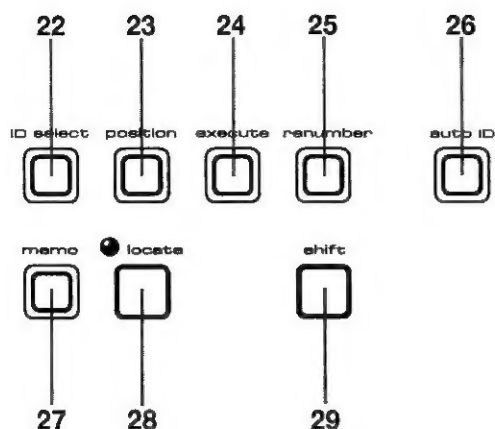
Quando sul display appare il codice ID desiderato, premendo il tasto EXECUTE (punto 24) verrà effettivamente registrato. Riferirsi anche al paragrafo "Registrazione".

23. Tasto POSITION: Permette di individuare un marcatore START ID o SKIP ID, con precisione di 5 frame, prima di attuare l'operazione WRITE. Prestabilisce un punto marcatore per tentativi, permettendo di spostare il marcatore ID Start/Skip con i tasti F.FWD e REW, oppure con la manopola DATA (nei limiti di ± 50 frame); permette anche di ascoltare il contenuto in questo punto.

24. Tasto EXECUTE: Provoca l'effettiva registrazione dei codici ID selezionati dal commutatore ID SELECT (punto 22).

25. Commutatore RENUMBER: Premendolo, inizia l'operazione RENUMBER, che assegna nell'ordine ad ogni codice ID START il proprio numero di programma (PNO).





- 26. Tasto AUTO ID:** Quando appare sul display la scritta AUTO ID, i codici ID Start e i numeri di programma verranno automaticamente registrati nell'area di subcodice del nastro ogni volta che, nel corso della registrazione, inizia una nuova selezione (un periodo di silenzio, seguito dal segnale). AUTO ID funziona con ingressi sia digitali che analogici.

Ogni volta che l'interruttore POWER viene portato su ON, sul display si deve accendere l'indicatore "AUTO ID", a meno che sia attivo l'interruttore di protezione della cassetta.

Se l'indicazione viene spenta premendo il tasto AUTO ID, non verranno registrati né i codici ID Start di riferimento, né i Numeri di Programma.

- 27. Tasto MEMO:** memorizza il tempo ABS attuale, definito come punto di autopoizionamento.
- 28. Tasto LOCATE:** fa in modo che l'R-9 si posizioni automaticamente in un punto selezionato da MEMO.
- 29. Tasto SHIFT:** serve per modificare la funzione di altri tasti.

SHIFT + MEMO visualizza il punto di autopoizionamento attualmente memorizzato.

SHIFT + AUTO ID modifica il livello di sensibilità del circuito AUTO ID.

- 30. Controlli REC LEVEL, sinistro e destro:** valgono soltanto per il livello di registrazione dei segnali d'ingresso analogici; non hanno effetto durante la registrazione di una sorgente digitale.

- 31. Selettore INPUT:** seleziona come sorgente per l'R-9 gli ingressi analogici oppure l'ingresso digitale. Quando si trova in posizione DIGITAL, sulla finestra del display appare la scritta "DIGITAL IN" e i segnali degli ingressi analogici vengono ignorati.

- 32. Commutatore REC MODE:** quando è predisposto su LONG, un nastro da 60 minuti garantirà 120 minuti di registrazione, uno da 90 minuti ne garantirà 180, e così via. Quando invece è predisposto su STANDARD, la durata della registrazione corrisponderà a quella indicata sull'etichetta della cassetta.

Scegliere il modo LONG solo per registrare da sorgenti analogiche o quando si registrano sorgenti digitali con cadenza di campionamento di 32 kHz.

- 33. Selettore REC LEVEL:** quando è in posizione REFERENCE, l'R-9 si predispone per funzionare con livello d'ingresso nominale di 500 mV. Di norma, si può lasciare il commutatore in posizione REFERENCE per registrare al livello ottimale, in quanto la maggior parte degli apparecchi analogici è prevista per funzionare con questo livello d'uscita. Se però l'apparecchio in questione trasmette segnali con differenti livelli nominali, portare il commutatore su MANUAL in modo da poter regolare il livello d'ingresso con i controlli REC LEVEL sinistro e destro.

NOTA: Quando il commutatore è in posizione REFERENCE, accertarsi che non ci sia rischio di passaggio dei picchi nell'area OVER del VU-meter di picco.

- 34. Selettore SAMPLING FREQUENCY:** sceglie la frequenza di campionamento che sarà usata per registrare i soli segnali d'ingresso analogici, tra i valori di 44,1 kHz o 48 kHz. La frequenza di 44,1 kHz equivale alla cadenza di campionamento dei Compact Disc e dovrà essere usata se il nastro servirà come master digitale per la produzione di CD. La frequenza di 48 kHz serve per altre applicazioni professionali.

Questo commutatore non ha effetto nella registrazione da ingressi digitali o durante la riproduzione. In tali casi l'R-9 commuterà automaticamente sulla frequenza alla quale questi segnali sono stati originariamente registrati, come risulta dai valori 48,0, 44,1 o 32,0 kHz visualizzati sotto la scritta DIGITAL IN.

- 35. Ricevitore dei segnali ad infrarossi del telecomando:** Per la ricezione dei segnali dell'unità di telecomando RC-563 in dotazione.

PANNELLO POSTERIORE

36. Connettori DIGITAL IN/OUT (OPTICAL):

OPTICAL IN: serve per il collegamento digitale mediante cavo a fibra ottica. Viene usato per l'ingresso di segnali digitali provenienti direttamente da una sorgente digitale.

OPTICAL OUT: serve per il collegamento digitale mediante cavo a fibra ottica. Viene usato per l'uscita di segnali digitali direttamente dall'R-9.

37. Selettore degli ingressi: portare questo commutatore in posizione OPTICAL quando è stata collegata una sorgente digitale tramite i connettori OPTICAL; portarlo invece in posizione coassiale quando si utilizzano i connettori COAXIAL.

38. Connettori DIGITAL IN/OUT (COAXIAL): queste prese INPUT e OUTPUT RCA servono per il collegamento alla porta I/O digitale di un'apparecchiatura audio digitale tipo consumer (SPDIF, IEC 958 tipo II), tramite un cavo coassiale da 75 Ω.

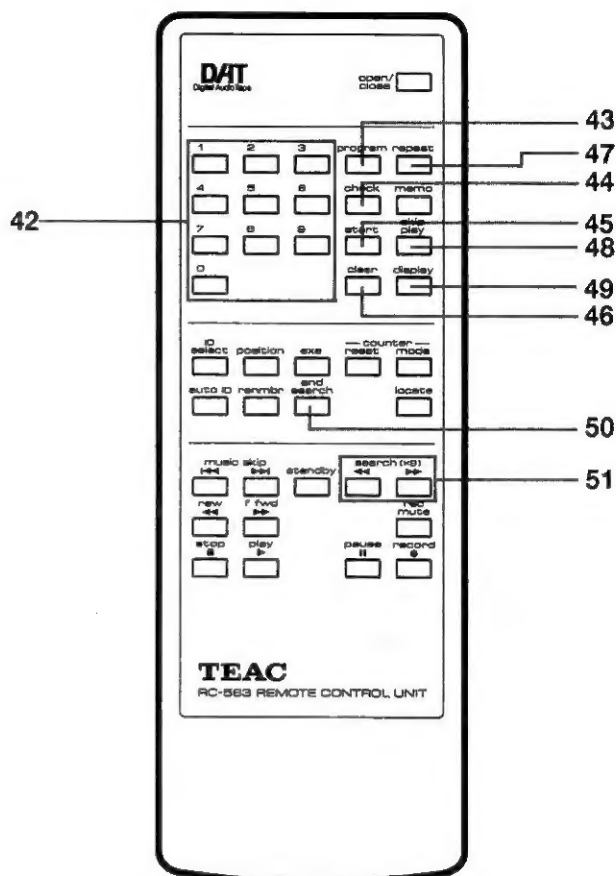
39. LINE IN: queste prese RCA servono a collegare all'R-9 sorgenti analogiche digitali sbilanciate. Il livello d'ingresso nominale è 500mV .

40. LINE OUT: serve per collegarsi agli ingressi di segnale analogici sbilanciati di apparecchiature esterne. Il livello nominale d'uscita è 500mV.

41. Selettore di tensione (per modelli di esportazione generica)

Quando è necessario cambiare la tensione dell'apparecchio per adattarla alla rete di distribuzione della propria zona, procedere come segue:

1. STACCARE IL CAVO DI RETE
2. Con un cacciavite, ruotare il selettore fino a quando appare il valore della tensione desiderata.

**UNITA' DI TELECOMANDO RC-563**

Descriviamo qui solo le funzioni esclusive del telecomando; tutte le altre sono duplicate sul pannello dell'R-9.

- 42. Tastiera numerica:** serve per impostare i numeri di programma per la ricerca diretta, oppure per la riproduzione programmata.
- 43. Tasto PROGRAM:** memorizza i programmi designati con la tastiera numerica per la riproduzione programmata.
- 44. Tasto CHECK:** è attivo nel modo PROGRAM. Ad ogni pressione di questo tasto appare sul display il successivo numero di programma in memoria, seguito dal rispettivo numero STEP (per esempio, "STEP 09 4" significa che la nona selezione della sequenza sarà il brano #4 sul nastro).

NOTA: il tasto CHECK non ha effetto quando è in riproduzione una sequenza PROGRAM.

- 45. Tasto START:**
1) PROGRAM PLAY START: se viene premuto dopo aver inserito nella memoria i programmi desiderati, questo tasto farà iniziare la riproduzione della sequenza.

2) **DIRECT SEARCH START:** se viene premuto dopo aver designato con la tastiera numerica il programma singolo desiderato, questo tasto farà posizionare il nastro all'inizio di quel programma (la scritta "SEARCH" lampeggia); appena arrivato a quel punto, l'apparecchio comincerà automaticamente a riprodurre (se invece si trovava nel modo **STANDBY**, passerà nel modo **PAUSE**).

46. Tasto CLEAR: serve per cancellare dalla memoria l'ultimo programma impostato.
(Per cancellare l'intera sequenza **PROGRAM** e ripristinare la condizione normale, premere **STOP**.)

Il tasto **CLEAR** viene anche usato per cancellare dal display qualsiasi numero impostato con la tastiera numerica.

47. Tasto REPEAT: serve per attivare una riproduzione ripetitiva. Se viene premuto una sola volta, questo tasto permette di riprodurre indefinitamente un programma singolo. Premendolo invece due volte, verrà ripetuto l'intero nastro. Nella riproduzione **PROGRAM**, una sola pressione del tasto **REPEAT** ha lo stesso effetto della doppia pressione: verrà ripetuta l'intera sequenza di programmi attualmente in memoria.

Il tasto **REPEAT** può essere premuto nel corso della riproduzione o prima di iniziarla.

48. Tasto SKIP PLAY: fa interrompere la riproduzione ogni volta che viene rilevato un indice di salto e fa avanzare velocemente il nastro fino al successivo indice d'inizio. Questa funzione è indicata dalla visualizzazione della scritta "SKIP PLAY". Premendo il tasto una seconda volta, la funzione viene disattivata.

49. Commutatore DISPLAY: fa variare la luminosità del display in quattro graduazioni.

50. Tasto END SEARCH: premendo questo tasto nei modi **PLAY**, **PAUSE** o **STOP**, il nastro avanzerà velocemente e si fermerà in corrispondenza al riferimento **END ID**. Se questo indice non è stato registrato, il nastro si fermerà all'inizio della sezione "non formattata".

51. Tasti SEARCH: premendo questi tasti durante la riproduzione, il nastro avanzerà a 9 volte la normale velocità, nella corrispondente direzione, fino a quando i tasti rimangono premuti.

Caratteristiche tecniche

Categoria:	registratore audio digitale con testina rotante
Velocità del nastro:	8,15 mm/sec nel modo STANDARD (è ammessa anche la velocità di riproduzione di 12,225 mm/sec) 4,075 mm/sec nel modo LONG 120 minuti nel modo STANDARD 240 minuti nel modo LONG (con cassetta da 120 minuti)
Tempo di registrazione:	2000 giri/min nel modo STANDARD 1000 giri/min nel modo LONG (durante la registrazione)
Velocità tamburo della testina:	circa 70 secondi (cassetta R-120)
Avvolgimento veloce:	ottupla
Correzione errori:	2
Numero di canali:	16 bit lineari nel modo STANDARD 12 bit non-lineari nel modo LONG
Bit di quantizzazione:	48 kHz (in registrazione/riproduzione, digitale/analogico) 44,1 kHz (in registrazione/riproduzione, digitale/analogico) 32 kHz (in registrazione/riproduzione; solo digitale in STANDARD, digitale/analogico in LONG)
Cadenza di campionamento:	10 Hz - 22 kHz $\pm 0,5$ dB in STANDARD 10 Hz - 14,5 kHz $\pm 0,5$ dB in LONG
Risposta in frequenza:	migliore di 92 dB migliore di 93 dB
Rapporto segnale/rumore:	minore di 0,004% (1 kHz, nel modo STANDARD)
Campo dinamico:	minore di 0,07% (1 kHz, nel modo LONG)
Distorsione armonica totale:	migliore di 85 dB (a 1 kHz)
Separazione tra i canali:	non misurabili (meno di $\pm 0,001\%$)
Wow & Flutter:	2 prese RCA
Ingressi — Analogico:	500 mV
Livello nominale ingresso:	50 k Ω , sbilanciati
Impedenza ingresso:	1 presa coassiale
— Digitale:	1 presa ottica
Uscite — Analogica:	2 prese RCA
Livello massimo uscita:	2,0 V
Livello nominale uscita:	500 mV
Impedenza uscita:	430 Ω , sbilanciati
PHONES:	1 presa 1/4"
Livello:	100 mW + 100 mW (carico 8 Ω)
— Digitale:	1 presa coassiale 1 presa ottica
Alimentazione:	
Europa	230 V AC, 50 Hz
Modelli per esportazione generica	100/120/230/240 V AC, 50-60 Hz
Potenza assorbita:	28 watt
Dimensioni (largh. x alt. x prof.):	442 x 150,5 x 355 mm
Peso:	circa 9,3 kg

< Accessori forniti >

- 1 unità di telecomando RC-563
- 2 batterie ("UM-3", "AA", "R6")
- 2 prese RCA per cavo di collegamento

- Caratteristiche tecniche e di progettazione soggette a modifiche senza preavviso, dovute a migliorie apportate al prodotto.
- Le illustrazioni possono differire leggermente dai modelli effettivi.
- Le caratteristiche qui elencate sono state determinate con la frequenza di campionamento di 48 kHz.